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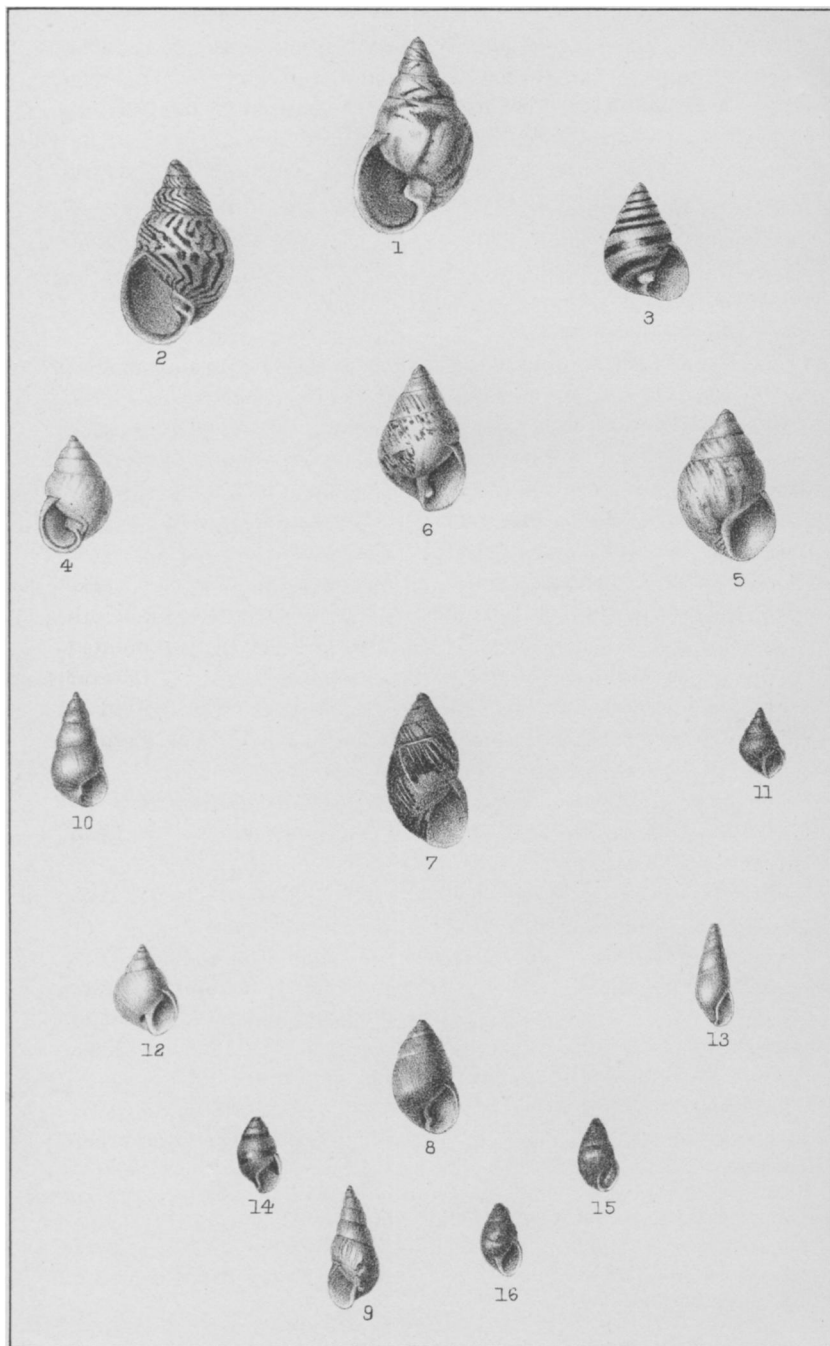
**A BIBLIOGRAPHIC AND SYNONYMIC CATALOGUE OF THE  
GENUS ACHATINELLA,**

BY W. D. HARTMAN, M. D.

The genus *Achatinella*,\* embraces a group of small, beautiful and variously colored land shells, peculiar to the Sandwich Islands. Mr. Swainson first introduced the genus to the notice of naturalists in Brand's Journal, in 1828, and in 1831 the same author assigned it a position in the systematic arrangement of species, under the above name. Since that period many new species have been described by naturalists. Dr. L. Pfeiffer in the *Malakozoologische Blätter*, and subsequently others have proposed sub-divisions for the numerous and diversified forms embraced by the genus. In some instances the lines of these sub-divisions are well-defined, while in others they are less marked. They have been generally adopted by conchologists, as they are found convenient for the arrangement of a collection. Mr. Thomas Bland says "the distinctions derived from the consideration of the form of the shells are arbitrary, and the limits are not well defined." His classification of the sub-divisions of the genus, is chiefly founded on the structure of the lingual dentition, "which indicates three groups, *a. Partulina* and *Achatinella* *b. Newcombia* and *Laminella*, and *c. Leptachatina*; judging from the shells alone, *Bulimella* and *Apex* belong to group *a*, while *Labiella* belongs to group *b* or *c* rather than to *a*." This arrangement is chiefly in accord with that of Dr. Pfeiffer and Mr. William H. Pease, for the details of which I must refer the reader to their several papers. I agree with Dr. Pfeiffer in eliminating *Carelia* and *Auriculella* as separate genera from *Achatinella*, and I also concur with Dr. Gulick in the opinion that *Frickella* should be added to *Auriculella*. I am also in accord with Mr. Lovell Reeve in the opinion that the small common shells for which Dr. Gould proposed the name of *Leptachatina*, should be removed from *Achatinella*, as they are more nearly allied to the *Oleacinidæ* than to the *Bulimidæ*, and they differ from *Achatinella* in being oviparous while the latter are viviparous. In consequence of the connection heretofore existing be-

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\* Although *Auriculella* possesses the same form of dentition as *Partula* and *Achatinella*, Dr. Pfeiffer has placed it in a separate genus, on conchological grounds, in which I concur. These minute shells, would seem to have no place in a serial arrangement of the genus *Achatinella*. Species marked † are in the author's collection.



Hartman on Achatinella.

tween *Achatinella* and *Leptachatina*, the latter has received especial attention in the preparation of this paper, and for the present it has been retained in the genus *Achatinella*. In analyzing the species of *Leptachatina* proposed by Dr. Gould, of which *L. acuminata* Gld. was designated as the type, they are found to be divisible into three groups. In the first may be placed the elongate or cylindrical and semi-transparent varieties, as *L. acuminata*, *striatula* and *cerealis* Gould, *gracilis* Pfeiffer, *tenebrosa* Pease, *terebialis* and *exilis* Gul., and *fusca* Newc. In the second, the short oval clear and polished varieties, as *cingula* Migh. *saccata* Hartm. *brevicula* Pse. and *nitida* Newc. And in the third, the larger inflated and more stout species, as *Hartmanii* Newc. *M. S. succincta*, *fumosa*, and *vitrea* Newc, *fusca* and *resinula* Gul. together with *corneola* and *pyramis* Pfr. The major part of the species are terrestrial in their habits, while a few are arboreal. In my examination of the *Achatinellæ*, I have also included the allied genus *Auriculella*. The generic name of *Achatinella* has been used by all authors previous to Dr. Pfeiffer's sub-division of the genus in *Malakozoologische Blätter* in 1854 and 1856. Owing to several causes the species have been burthened with numerous synonyms, many of which have been herein omitted, to avoid a needless repetition of names. Their variability in form, age and color, has misled naturalists into the error of multiplying the species, and a change of environment Dr. Newcomb informs us, is known to so alter the appearance of some, as to cause them to be mistaken for distinct species. A change of environment and malnutrition materially modifies the growth of all animals, and nowhere is it more observable than in the molluscan fauna. The different appearance of depauperized or aberrant forms of shells is a prolific source of error, and often of embarrassment to the student of natural history, since corrections can only be made by the examination of types in scattered collections. Mr. Geo. W. Tryon Jr. in his recent books on conchology, has relegated to synonymy many shells heretofore considered of specific value, some of which are doubtless the result of environment or hybridization. In the early history of the genus *Achatinella*, naturalists in different parts of the world were engaged at the same time in describing the species, and some of the names then given have only been established by priority of publication. The application of boiling water to remove the animal, materially alters the color of the shell, changing a green or bright green to a dirty yellow; and the manufacture of species by

scrapping, has also been resorted to, to increase the number of commercial species.

Hybridization may have been a factor in the origin of some varieties as occurs in the allied genus *Partula*. The preservation of the species in the lower animals is due in a great measure to animal instinct, but where nearly allied species are thrown together, as often happens in the involuntary change of position of *Achatinella*, or the proximity of broods, as occurs with *Partula*, hybridization may take place. It is well known that embryonic young are priceless to the biologist, and since the tissue cells of species evolve from pre-existing germs and do not originate *de novo*, the shape of the embryonic or apical fold of each species of viviparous mollusk, should be the true index of a species, except in the case of hybrids, when it would take the form of one or the other of the parents, and would be farther distinguished in the adult, by the form, size and color of the predominating parent, a law always observable in hybrids.

Dr. Isaac Lea has always maintained the importance of the shape of the apical fold, for a correct determination of a species of *Unio*, I have said elsewhere, that viviparous hermaphrodite mollusca (being *cold blooded* animals) would probably more readily hybridize than *warm blooded*, which might in a measure account for the numerous forms and varieties of Unionidæ and Strepomatidæ in the rivers of the United States. The late Prof. Haldeman believed that hybrid Unios existed, and farther that individuals between *Melantho decisa* and *M. ponderosa* Say are often found, which look very much like hybrids of these species. It is well-known that fish, frogs and toads (which are cold blooded animals) hybridize, and recently some species of salmon have been successfully and profitably hybridized.

So far as known the food plants of the *Achatinella* have no influence in the coloration of the shell; those species possessing a black, dark or slate colored mantle, secrete a variegated shell, while others with a greenish, bluish, light yellow or flesh-colored mantle, secrete a shell with different shades of yellow. The varied and gorgeous tints of the shells of Achatinellæ, are probably owing to the action of light and oxygen on the secretions from the glands of the mantle; the striations and variations of color, are probably due to the chemical composition of a fluid from a different set of glands; hence the painting of the arboreal species is more bright and pleasing than that of the terrestrial, which are generally of uniform and somber hues. The surface of all the porphyroid and gaily painted species, exhibit under a glass, waved spiral striæ, similar to Partulæ. These

lines commence at the termination of the first one-and-a-half whorls of the apex, which corresponds to their embryonic age. The apices of some of the *Amastra* are coarsely plicate, in this respect resembling *Laminella*. This is especially noticeable in the elongate species, as *A. magna*, *assimilis*, *biplicata*, *Huchinsonii*, *turritella* and some others which have been classed with *Laminella* by Dr. Pfeiffer; in others the plicæ of the apex are small wrinkles, and in *A. farcimen*, *reticulata*, *tristis*, *elliptica*, and some others, the apex is smooth and rounded, forming a sub-group of *Amastra*. A more constant character is found in the species of *Amastra* being *destitute of spiral striae*, differing in this respect from the porphyroid *Achatinellæ*. The *Amastra* being ground species and living beneath dead leaves and other debris, when the shells are deprived of the animal and are exposed to the atmosphere, the epidermis is more readily detached than in other *Achatinellæ*.

"The facts relating to the geographical distribution of *Achatinella*, and the development of so large a number of species within the limits of small areas, are very remarkable and interesting, and have presented problems bearing on the theories of evolution. Each island has its own peculiar species, and not only species, but its own peculiar types, or groups of species, of similar form. Again, on islands where there has been a full development of *Achatinella*, each principal mountain ridge and valley has its own peculiar species which are found nowhere else; *the species of each ridge or valley being often connected with those of the next—by intermediate varieties*. Another important fact observed in the distribution of the *Achatinella* is, that on a mountain chain with many culminating peaks, the tendency is to divergence of species, while on an individual mass of mountains concentrating towards a single culminating peak, the tendency is to a convergence of species." "The structure of the Hawaiian Islands is volcanic; and in studying the distribution of shells over them, it is important to note the relative ages of the several islands. Geologically speaking, Kauai is the oldest; next in the series is Oahu; then Maui with the adjoining islands of Molokai and Lanai; and last comes Hawaii, in the southern portion of which volcanic fires are still raging."

"OAHU. The development of *Achatinella* on this island, both as regards number and variety of form and color, has been greater than on any other island of the group. Unlike most of the other islands which have individual mountain masses, Oahu has two true ranges or chains of mountains, a longer and a shorter one, with many in-

dependent culminating peaks. The aggregate length of the two ranges is 50 miles. The sides of these ranges, their entire length, are furrowed by deep valleys separating lofty ridges. These valleys and ridges are the home of *Achatinella*: each valley and ridge has its own distinct species which are connected with those of the next valley and ridge, by a multitude of intermediate varieties, presenting minute gradations of form and color. These two ranges of mountains have already furnished 227 distinct described species of *Achatinella*, the number of varieties has been estimated as high as 800 or 900. All these species and varieties, are found in an area of less than 120 square miles; and a considerable portion of the longer range remains yet to be explored. These species have all the various shapes from globose to conic, ovate and elongate-conical, and present almost every possible shade and variety of coloring, from pure white to jet black, and all the shades of green, rose, yellow, brown and ash; sometimes several of these colors are combined in one species, either in regular or irregular bands, or tessellated, marbled or zigzagged designs."

"WEST MAUI. On this part of Maui we have the converse of Oahu. Its individual mass of mountains, clustering around one common centre peak, 2000 feet higher than any part of Oahu, furnishes only 30 described species of *Achatinella*, each principal valley and ridge has its own peculiar species or varieties; but all the arboreal species can be referred to seven leading types, these differ much from the Oahu types, and do not present the same varieties of form or color. The prevailing colors are white and dark brown with all the intervening shades of either, plain or variously arranged in bands or zigzagged lines."

"EAST MAUI. The distribution of *Achatinella* on this part of Maui is not fully known. All its mountain gorges and ridges concentrate around the rim of the immense crater of Haleakala, a circumscribing bound of nearly thirty miles in extent. The almost impenetrable forest on the mountain slopes to the east and south of the crater comprising a belt of twenty miles long and six miles wide, remain unexplored, and its molluscan life is unknown. The woodlands on the north-west slope of the mountain facing West Maui furnish 29 described species of *Achatinella*; but they are the same or unmistakable counterparts of those found on West Maui. The narrow depression of land between East and West Maui has led many to infer that they were originally separate islands, this

similarity of shell-types would seem to indicate that, if ever separate, they must have been united before the development of molluscan life; otherwise we should expect to find the types of East and West Maui differing as much from each other as do those of Maui and the contiguous islands of Molokai and Lanai."

"MOLOKAI. The distribution of *Achatinella* on this island presents some new features not observed on any other island. The island is forty miles long with a width of only seven miles, it is about one-third the size of Oahu, and like it has a mountain range extending nearly thirty miles through its length. The range is furrowed on each side by deep valleys. Some of these mountain gorges are very wide and cut deep into the narrow axis of the island. The larger ones have proved an effectual barrier to the migration of the shells. The island is thus divided into three natural sections, and each section retains its own peculiar species without intermingling with those of the next section." "Molokai furnishes 25 described species which are about equally divided between the three sections of the island, these shells exhibit more variety of form and color than those of Maui, and have peculiarities which separate them entirely from types of other islands."

"LANAI. This is the smallest and most arid of the shell producing islands. Its area is 100 square miles, of which probably not over one tenth is suited for the support of mollusks. The island is, however notable as the home of *A. magna* Adams, the largest shell of the whole *Achatinella* family. Specimens in our cabinet measure  $1\frac{1}{2}$  inches long, the whole number of species of *Achatinella* on Lanai is 13, and they exhibit peculiarities of type."

"KAUAI. This is the oldest and most verdant island of the group. It lies to the west of Oahu, and is separated from it by a channel wider than occurs between any of the other islands. Its extensive forests, luxuriant vegetation and moist climate render it peculiarly adapted for the abode of *Achatinella*; and one would naturally expect to find here a larger, and if possible, higher development of the family. But we are doomed to disappointment, the island yields no arboreal species, the shells are terrestrial, and those classed with *Achatinella* belong to the plainest forms of the *Amastrea* and *Leptachatina* groups; 5 species to the former and 18 to the latter. Kauai, however, does furnish a very peculiar and interesting group of large terrestrial shells, remarkable for their elongate turretted form. The generic name of *Carelia* has been provided for the group;



it embraces some seven species. Specimens of *Carelia turricula* Migh. in my cabinet measure three inches long. This group has no place in the *Achatinella* family, as classed by M. Gulick. It lacks the peculiar spiral twist of the columella and other generic characters of that family; living specimens of *Carelia* are now very rare, but at some period in the history of Kauai they were exceedingly abundant. The alluvial deposits near the coast portions of the island, contain multitudes of these shells in a semi-fossil state, which have been washed from the mountains by the freshets of ages past. The small neighboring island of Nūhau also has a single species of *Carelia* found in sand and mud deposits; no living specimens are found there now."

"HAWAII. This island embraces within its bounds two-thirds of the total area of the whole group. It is also supposed to be the most recently formed of the islands. The volcanic forces are still at work here. The extensive forests are as well adapted for the support of *Achatinella*, as those of any of the other islands, but it furnishes only a single arboreal species, and five terrestrial. The arboreal species is *A. physa*; it was first described by Dr. Newcomb in the Proceedings of the Zoological Society of London in 1853. In a subsequent number of the same Journal, Mr. Wm. H. Pease refers to this same shell as a "species rarely met with on the mountains of Hawaii." The centre of production is the Kohala range of mountains, notably the most ancient portion of the island; and it exists there now in unparalled abundance. During a recent visit to the locality in a few minutes I collected several hundred specimens, picking them from trees and low bushes as rapidly as one would gather huckleberries from a prolific field. The shell appears to be slowly migrating into the adjoining districts of Hamakua and Kona, and assuming new shapes and varieties of coloring. One of these varieties in our cabinet is almost worthy of assignment as a new species. The conchologist of a few centuries hence will no doubt be naming *Achatinella* from the different districts of Hawaii of manifold forms and gaudy colors, which have developed through the mysterious processes of evolution from the humble *A. physa* of the Kohala Mountains."

"The discovery of so large a number of land shells of the same genus within limited island areas was unprecedented, and at once induced the belief that the "completion of a collection of the genus had been sealed," this is a mistake. The homes of *Achatinella*

are on rugged mountains, densely covered by vegetation and their sides furrowed by deep and almost inaccessible ravines and large districts on Oahu and East Maui which have never been visited by white men, remain yet to be explored. It will require years of research and study, before the number and exact distribution of the remaining species can be ascertained. It is also generally supposed that these shells are becoming extinct by the ravages of cattle through our forests. This is true in respect to a limited number of species on the island of Oahu whose habitats were the forests on the lowest range of hills. Some of these hills have been denuded of woods, not only by cattle, but the woodman's axe, and certain species are becoming rare. The favorite resorts of many species are the Ki (*Dra-cena terminalis*) and the Olona (*Boehmeria stipularis*) both excellent fodder plants. But in localities where these plants have been entirely destroyed by cattle, the shells have generally selected homes on other adjoining plants. The ravages particularly of wild cattle in our mountain forests are certainly to be deprecated, nevertheless by clearing the under brush they render the forests more accessible for the collection of known species; and by opening the paths to higher and more dense forests they facilitate the discovery of new species. The agencies now threatening the wholesale destruction of these little gems of the forest are the rats and mice, which have become very abundant in mountain forests, particularly where there are no cattle. Their ravages are not confined to the shells whose habitats are on the ground, but extend to those found on trees. It is not uncommon to find around the charnal cells of these noxious little animals hundreds of empty, mutilated shells. Notwithstanding these threatening agencies, the *Achatinellæ* are still quite abundant on Oahu and Molokai, where cattle have the widest range, though not so abundant as formerly on West Maui where the cattle ranges are somewhat limited and the mice enjoy greater immunity. In a recent excursion with a friend through a portion of the mountain forests between Ewa and Waialua on Oahu more than 3000 shells were collected in a few days embracing over fifty species of *Achatinella*, some of them new to science. In a similar trip around Molokai nearly 5000 were collected, embracing thirty species, some new."<sup>1</sup>

To Wesley Newcomb, M. D. more than to any author on *Achatinella*, we are indebted for a correct knowledge of the described species of this beautiful genus of shells. During a residence of nine

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<sup>1</sup> Mr. D. D. Baldwin in Hawaiian Almanac and Annual.

years in the Sandwich Islands he collected and reared large numbers of the different species and observed the numerous varieties from a common parentage. When in Europe in company with the late Dr. A. A. Gould he examined the types of Dr. L. Pfeiffer and others which enabled him to correct the synonymy of many doubtful species; all of which he has embodied in his Synopsis of the Genus, which entitles him to the designation of authority on *Achatinella* "par excellence."

For convenience of reference I have arranged the species alphabetically under the several sections, rather than in a connected series, as was attempted by Mr. Pease. The sections of *Achatinellæ* being more or less artificial, authors are not always in accord as to which certain species should be assigned. In the majority of instances, I have followed Dr. Pfeiffer or Mr. Pease in the distribution of the species among the sections, being guided in the main by authentic examples, or by figures and descriptions of authors; the sub-section *Helicterina* adopted by Mr. Pease from Baron Ferussac, has been supplanted by *Partulina*, the former having been preoccupied.

In the preparation of this paper I am indebted for aid to several friends. To Prof. A. Agassiz for the loan of the entire Pease collection of *Achatinella* together with all his duplicates amounting to near two bushels of examples, I have had in my possession several entire suites of *Achatinellæ*, kindly loaned to me by Prof. James Hall, Dr. Lea, Mrs. George Andrews and Mr. R. Ellsworth Call, by which I was enabled to identify types from authors hands. Recently, at the invitation of Dr. Newcomb I spent the greater part of two days in the examination of his collection of *Achatinella* made some years ago in the Sandwich Islands. My acknowledgements are also due him for assistance in the determination of many varieties. When in Europe in 1883 I purchased some of the species of Messrs Gulick and Smith from G. B. Sowerby Jr. Recently I have been favored by Mr. D. D. Baldwin of the island of Maui with written catalogues of the localities of the *Achatinellæ* of the Sandwich Islands, together with numerous examples of *Achatinella* and especially with specimens taken from the determined type examples of Mr. Gulick, in the Hawaiian Museum. The geographical distribution of the *Achatinellæ* in those islands together with their habits, which has been embodied in this paper was expressly prepared by Mr. Baldwin for the Hawaiian Almanac and Annual. I am also under obligations to Mr. Geo. W. Tryon Jr., for his uniform courtesy in aiding me in

the examination of books and examples belonging to the Academy of Natural Sciences.

The following references have been abbreviated in the Catalogue:—  
*Monographia Heliceorum viventium* and *Nomenclator Heliceorum viventium* by Dr. L. Pfeiffer; *Proceedings of the Zoological Society of London*, containing the papers of Drs. Newcomb, Pfeiffer and Gulick; *Proceedings of the Boston Society of Natural History*, containing the papers of Drs. Gould and Mighels; *Contributions to Conchology* by C. B. Adams; *Proceedings of the California Academy of Sciences*; the *American Journal of Conchology*, containing the papers of Dr. Newcomb, and also the *Journal de Conchyliologie*, containing many of the papers of Mr. Wm. H. Pease.

Species marked † are in the author's collection.

The arrangement of the sub-groups of *Achatinella* herein adopted is as follows:—

A	{	<i>Partulina</i>	B	{	<i>Perdicella</i>
		<i>Bulimella</i>			<i>Newcombia</i>
		<i>Achatinellastrum</i>			<i>Labiella</i>
		<i>Eburnella</i>			<i>Laminella</i>
		<i>Apex</i>			<i>Amastra</i>
					<i>Carinella</i>
			C	{	<i>Leptachatina</i>

#### Section PARTULINA Dr. L. Pfeiffer.

**P. aptycha**, Pfr. (*Achatinella*.) *Proc. Zool. Soc.* tab. 30, f. 1-1855.

*Newcombia aptycha*, Pfr. *Mall. Blätt.* 165, 1856.

*Helicter aptycha*, Pse. *Proc. Zool. Soc.* 615-1869.

*Perdicella aptycha*, Pfr. *Nomen. Hel. Viv.* 315-1881.

*Sandwich Islands.*

†**P. cinerosa**, Pfr. (*Achatinella*.) *Proc. Zool. Soc.* tab. 30, f. 5,-1855.

(*Helicter perversa*, Pse.) *Proc. Zool. Soc.* 645-1869. (Non Swains.)

*Sandwich Islands.*

†**P. compta**, Pse. (*Partulina*.)

*Partulina compta*, Pse. *Jour. Conchyl.* xvii-1869.

*Molokai.*

†**P. crassa**, Newc. (*Achatinella*.) *Proc. Zool. Soc.* pl. 24, f. 71-1853.

*Bulimella crassa*, Pfr. *Mall. Blätt.* 124-1854, 163-1856.

*Partulina crassa*, Pse. *Proc. Zool. Soc.* 647-1869.

*Lanai.*

**P. dolium**, Pfr. (*Achatinella*.) Proc. Zool. Soc. tab. 30, f. 15-1853.

*Bulimella dolium*, Pfr. Mall. Blätt. 165-1856.

*Partulina dolium*, Pse. Proc. Zool. Soc. 647-1869.

*Sandwich Islands.*

†**P. dubia**, Newc. (*Achatinella*.) Proc. Zool. Soc. tab. 24, f. 65-1853.

*Achatinella radiata*, Pfr. Mall. Blätt. 116-1854. Non Gould.

*Bulimella dubia*, Pfr. Mall. Blätt. 162-1856.

*Achatinellastrum dubium*, Pse. Proc. Zool. Soc. 648-1869.

*Partulina dubia*, Pfr. Nom. Helic. Viv. 305-1881.

*Maui.*

**P. Dwightii**, Newc. (*Achatinella*.) Amer. Jour. Conch. ii, pl. 19, f. 9.

*Partulina Dwightii*, Pfr. Mall. Blätt. 162-1856.

*Molokai.*

†**P. Gouldii**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 22, f. 1-1853.

*Achatinella talpina*, Gul. Ann. Lyc. N. Y. pl. 7, 138-1856.

*Partulina Gouldii*, Pfr. Mall. Blätt. 116-1854; 162-1856.

*Waialuku Maui.*

†**P. grisea**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 24, f. 60-1853.

*Achatinella dubia*, Pfr. Var.  $\beta$ . 1854.

*Partulina grisea*, Pfr. Mall. Blätt. 117-1854.

*Achatinellastrum grisea*, Pse. Proc. Zool. Soc. 1869.

*East Maui.*

†**P. marmorata**, Gld. (*Achatinella*.) Proc. Bost. Soc. p. 200-1847. Expd. Shells tab. 7, f. 94.

†**Achatinella Adamsii**, Newc. Ann. Lyc. N. Y. 19-1853. Proc. Zool. Soc. pl. 22, f. 20-1853.

*Achatinella induta*, Gul. Ann. Lyc. N. Y. 207-1856.

†*Achatinella ustulata*, Gul. Ann. Lyc. N. Y. pl. 11, p. 37-1856,  
(reversed ex.)

*Achatinella plumbea*, Gul. Ann. Lyc. N. Y. pl. 11, f. 39, 1856.

*Laminella marmorata*, Pfr. Mall. Blätt. 126-1854.

*Bulimella marmorata*, Pfr. Mall. Blätt. 163-1854.

*Bulimella marmorata*, Pfr. Nomen. Helic. Viv. 306-1856.

*Partulina marmorata*, Pse. Proc. Zool. Soc. 647-1869.

*Partulina perdix*, Pfr. Mall. Blätt. 116-1854. (Non Rve.)

*Haleakala Waialuku and Kula E. Maui.*

*Obs.* The variable coloration of this species has been the source of its numerous synonymy.

**P. morbida**, Pfr. (*Achatinella*.) Mon. Helic. vi-167,

*Helicter morbida*, Pse. Proc. Zool. Soc. 645-1869.

*Achatinellastrum morbida*, Pfr. Nomen. Helic. Viv. 306-1881.

*Sandwich Islands.*

†*P. perdix*, Rve. (*Achatinella*.) Mon. tab. 6, f. 43a, 43b, 1850.

*Achatinella pyramidalis*, Gul. Ann. Lyc. N. Y. pl. 7, p. 32-1856.

*Achatinella undosa*, Gul. Ann. Lyc. N. Y. pl. 7, f. 33-1856.

*Partulina perdix*, Pfr. Mall. Blätt. 116-1854. = *marmorata*, Newc.

*Partulina marmorata*, Pse. Proc. Zool. Soc. 647-1869.

*Lahaina and Kula, E. Maui.*

*Obs.* Dr. Newcomb in his excellent synopsis of the genus *Achatinella*, has described the animal of *A. perdix* Pfr. which materially differs from that of *A. perdix* Rve.; they are doubtless specifically different.

†*P. proxima*, Pse. (*Partulina*.) Pl. f. 1-2.

*Partulina proxima*, Pse. Proc. Zool. Soc. 6-1862.

*Bulimella proxima*, Pfr. Nomen. Helic. Viv. 307-1881.

*Molokai.*

†*P. radiata*, Gld. (*Achatinella*.) Proc. Bost. Soc. 27-1845.

*Partula radiata*, Pfr. Mon. Helic. Viv. iii, 454.

*Partula densilineata*, Rve. Mon. Part. pl. 2, f. 9-1850.

*Bulimus Gouldii*, Pfr. Mon. Helic. Viv. ii, p. 74.

*Achatinella dubia*, Pfr. (Non. Newc.) Mall. Blätt. 116-1854.

*Achatinella grisea*, Pfr. (Non. Newc.) Mall. Blätt. 117-1854.

*Achatinellastrum radiatum*, Pse. Proc. Zool. Soc. 646-1869.

*Partulina radiata*, Pfr. Mall. Blätt. 162-1854.

*Maui.*

†*P. Redfieldii*, Newc. (*Achatinella*.) Proc. Zool. Soc. tab. 22, f. 5-1853.

*Partulina Redfieldii*, Pfr. Mall. Blätt. 115-1854.

*Bulimella Redfieldii*, Pfr. Mall. Blätt. 163-1856.

*Molokai.*

*P. rufa*, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 22, f. 3-1853.

*Achatinellastrum rufa*, Pfr. Mall. Blätt. 137-1854-164-1856.

*Partulina rufa*, Pse, Proc. Zool. Soc. 647-1869.

*Molokai, E. Maui.*

†*P. splendida*, Newc. (*Achatinella*.) Proc. Zool. Soc. tab. 22, f. 4-1853.

*Achatinella Bayleana*, Gul. Ann. Lyc. N. Y.; 202, pl. 7b, 31a. 31b-1858.

*Partulina splendida*, Pfr. Mall. Blätt. 115-1854, 162-1856.

*Waialuku, Maui.*

†*P. Tappaniaua*, C. B. Adams. (*Achatinella*.) Conch. Cont. 126-1850.

†*Achatinella eburnea*, Gul. Ann. Lyc. N. Y. 199, f. 28a, 28b, 1856.

†*Achatinella ampulla*, Gul. Ann. Lyc. N. Y. 200, f. 29, 1856.

†*Achatinella fasciata*, Gul. Ann. Lyc. N. Y. 201, f. 30, 1856.  
*Bulimella Tappaniana*, Pse. Proc. Zool. Soc. 647-1869.

*Maui.*

†*P. tessalata*, Newc. (*Achatinella*.) Proc. Zool. Soc. t. 23, f. 28-1853.  
*Achatinella insignis*, Mighls.? (Pfr.)  
*Partulina tessalata*, Pfr. Mall. Blätt. 115-1854, 162-1856.

*Molokai.*

†*P. virgulata*, Mighl. (*Partula*.) Proc. Bost. Soc. 20-1845.  
*Bulimus Rohri*, Pfr. Zeitsch. 1846.  
*Achatinella Rohri*, Rve. Tab. 1, f. 3-1850.  
*Achatinella insignis*, Pfr. (Newc.) In schedule. (Pfr. & Rve.)  
*Partulina Rohri*, Pfr. Mall. Blätt. 114-1854, 162-1856.  
*Partulina virgulata*, Pfr. Nomen. Helic. Viv. 305-1881.

*Molokai.*

Section **BULIMELLA**, Dr. L. Pfeiffer.

†*B. abbreviata*, Rve. (*Achatinella*.) Mon. pl. 3, f. 19, April 1850.  
*Achatinella clementina*, Pfr. Proc. Zool. Soc. 205-1855.  
*Achatinella nivosa*, Newc. Proc. Zool. Soc. pl. 12, f. 6-1853.  
 (Manufactured.)  
*Bulimella abbreviata*, Pfr. Mall. Blätt. 135-1854.  
*Achatinellastrum abbreviata*, Pfr. Mall. Blätt. 164-1856.  
*Bulimella abbreviata*,= *bacca*, Pse. Proc. Zool. Soc. 647-1869.

*Palolo, Oahu.*

*B. bacca*, Rve. (*Achatinella*.) Mon. pl. 6, f. 45.  
*Laminella bacca*, Pfr. Mall. Blätt. 135-1854.  
*Achatinellastrum bacca*, Pfr. Mall. Blätt. 164-1856.  
*Bulimella bacca*, Pse. Proc. Zool. Soc. 647-1869.

*Palolo, Oahu.*

†*B. bulimoides*, Swains. (*Achatinella*.) Zool. Illus. ii, 450.  
*Achatinella bulimoides*, Rve. Mon. t. 4, f. 28.  
*Achatinella obliqua*, Gul. Ann. Lyc. N. Y. 245, f. 63, 1858.  
*Achatinella oömorpha*, Gul. Ann. Lyc. N. Y. 246, f. 64, 1858.  
*Bulimella bulmoides*, Pfr. Mall. Blätt. 119-1854, 162-1856.

*Kahana, Oahu.*

†*B. Byronii*, Gray. (*Helix*.) Woods Index, Suppl. pl. 7, f. 30.  
*Achatinella melanostoma*, Newc. Proc. Zool. Soc. pl. 22, f. 7,-1853.  
*Achatinella limbata*, Gul. Ann. Lyc. N. Y. pl. 8, f. 70-1858.  
*Achatinella pulcherrima*, Rve. (Non Swains.) Mon. pl. 3, f. 23.  
*Laminella Byronii*, Pfr. Mall. Blätt. 136-1854.  
*Bulimella Byronii*, Pse. Proc. Zool. Soc. 346-1869.

*Ewa, Oahu.*

†**B. decipiens**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 24, f. 68-1863.

*Achatinella planospira*, Pfr. Proc. Zool. Soc. pl. 30, f. 8-1855.

†*Achatinella cuneus*, Pfr. Proc. Zool. Soc. 205, 1858. Sinistral.

†*Achatinella torrida*, Gul. Ann. Lyc. N. Y. pl. 8, f. 68-1858. Sinistral.

*Achatinella corrugata*, Gul. Ann. Lyc. N. Y. pl. 8, f. 66, 1858. (Short var.)

*Achatinella scitula*, Gul. Ann. Lyc. N. Y. pl. 8, f. 61. (Reversed smoothe var.)

*Achatinella herbacea*, Gul. Ann. Lyc. N. Y. pl. 8, f. 52. Var.

*Bulimella viridans*, Pfr. (Non Mighl.) Mall. Blätt. 121-1854, 163-1856.

*Bulimella decipiens*, Pse. Proc. Zool. Soc. 646-1869.

*Bulimella decipiens*, Pfr. Nomen. Helic. Viv. 306-1881.

*Koolauloa, Oahu.*

*Obs.* This is a species affected by environment, hence its protean forms.

†**B. elegans**, Newc. (*Achatinella*.) Proc. Zool. Soc. tab. 24, f. 57-1853.

(*Bulimella elegans*, Pfr. Mall. Blätt. 163-1856.

*Hanula, Oahu.*

**B. faba**, Pfr. (*Achatinella*.) Proc. Zool. Soc. 30-1859.

*Bulimella faba*, Pse. Proc. Zool. Soc. 646-1869.

*Sandwich Islands.*

**B. Forbsiana**, Pfr. (*Achatinella*.) Proc. Zool. Soc. pl. 30, f. 16-1855.

*Bulimella Forbsiana*, Pfr. Mall. Blätt. 163-1856.

*Palolo Oahu.*

†**B. glabia**, Newc. (*Achatinella*.) Proc. Zool. Soc. tab. 23, f. 23-1853.

*Achatinella elegans*, Pfr. (Non Newc.) Mon. Helic. iv-520.

*Achatinella platystyla*, Gul. Ann. Lyc. N. Y. Pl. 6, f. 25-1856.

*Bulimella glabra*, Pfr. Mall. Blätt. 124-1854.

*Kawaiawa Oahu.*

**B. Hanleyana**, Pfr. (*Achatinella*.) Proc. Zool. Soc. 202-1855.

*Bulimella Hanleyana*, Pfr. Mall. Blätt. 163-1856.

*Bulimella Hanleyana*, Pse. Proc. Zool. Soc. 646-1869.

**B. Lehuensis**, Smith. (*Achatinellastrum*.) Proc. Zool. Soc. pl. 9, f. 8-1873.

*Achatinellastrum Lehuensis*, Pfr. Nomen. Helic. Viv. 308-1881.

*Lehui Oahu.*

*Obs.* This shell may equal *Bulimella multicolor*, Pfr.

**B. morbida**, Pfr. (*Achatinella*.) Proc. Zool. Soc. 30-1859.

*Helicter morbida*, Pse. Proc. Zool. Soc. 649-1869.

*Bulimella morbida*, Pfr. Nomen. Helic. Viv. 306-1881.

*Sandwich Islands.*



†**B. multicolor**, Pfr. (*Achatinella*.) Proc. Zool. Soc. pl. 30, f. 11, Jan'y 1855.

*Achatinella oviformis*, Newc. Proc. Zool. Soc. 208, Nov. 1855.

*Bulimella multicolor*, Pfr. Mall. Blätt. 165–1856. *Oahu.*

†**B. multilineata**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 22, f. 23–1853.

*Helicter multilineata*, Pse. Proc. Zool. Soc. 645–1869.

*Achatinella monacha*, Pfr. Proc. Zool. Soc. pl. 30, f. 9–1855, var.

*Bulimella multilineata*, Pfr. Mall. Blätt. 163–1856.

*Kolaupoco Maui.*

†**B. ovata**, Newc. (*Achatinella*.) Ann. Lyc. N. Y. 22–1853. Proc. Zool. Soc. tab. 22, f. 2–1853.

*Achatinella Wheatleyi*, Newc. Ms. Syn. Ann. Lyc. N. Y. 147–1855.

†*Achatinella candida*, Pfr. Proc. Zool. Soc. pl. 30, f. 4, 4a–1855.

†*Achatinella Frickii*, Pfr. Proc. Zool. Soc. pl. 30, f. 7, 1855.  
small var.

†*Achatinella vidua*, Pfr. Proc. Zool. Soc. pl. 30, f. 10–1855.

†*Achatinella rotunda*, Gul. Ann. Lyc. N. Y. 249, pl. 8, f. 67–1868.

*Achatinella cervina*, Gul. Ann. Lyc. N. Y. 241, pl. 8, f. 62–1868.

†*Achatinella spadicea*, Gul. Ann. Lyc. N. Y. 214, pl. 7, f. 65–1868.

*Achatinella phaeozona*, Gul. Ann. Lyc. N. Y. 214, pl. 7, f. 40, 1865, immature.

*Achatinella lorata*, Rve. Non Fér. Mon. pl. 1, f. 6.

*Bulimella ovata*, Pfr. Mall. Blätt. 119–1854, 163–1856.

*Koolauloa Oahu.*

*Obs.* This is a very variable species in size and coloration.

†**B. rosea**, Swains. (*Achatinella*.) Zool. Illus. ii, tab. 123. f. 1.

*Bulimella rosea*, Pfr. Mall. Blätt. 119–1854, 163–1856.

*Obs.* Recently I have received from Mr. D. D. Baldwin of Honolulu a small white variety with a yellow lip, see pl. I, fig. 4.

*Waialua, Oahu.*

†**B. rutila**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 22, f. 21–1853.

*Achatinella macrostoma*, Pfr. Proc. Zool. Soc. pl. 30, f. 6–1855.

*Achatinella viridans*, Pfr. Mall. Blätt. 120–1854. Non Mighl.

*Bulimella rutila*, Pse. Proc. Zool. Soc. 646–1869.

*Palolo and Niu, Oahu.*

†**B. rugosa**, Newc. (*Achatinella*.) Proc. Zool. Soc. tab. 22, f. 22–1853.

*Bulimella rugosa*, Pfr. Mall. Blätt. 123–1854, 163–1856.

*Ewa, Oahu.*

**B. solitaria**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 24, f. 60—1853.

*Achatinellastrum solitaria*, Pfr. Mall. Blätt. 163—1856.

*Bulimella solitaria*, Pse. Proc. Zool. Soc. 647—1869.

*Palola, Oahu.*

†**B. sordida**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 23, f. 27—1853.

*Achatinella Swainsonii*, Pfr. Proc. Zool. Soc. pl. 30, f. 13—1855.

*Bulimella sordida*, Pfr. Mall. Blätt. 163—1856. *Lehui, Oahu.*

*Obs.* I have followed Dr. Newcomb in placing *Swainsonii* as a synonym of *sordida*, Dr. Pfeiffer in *Nomen. Helic. Viv.* gives it as a variety of *sordida*.

†**B. Sowerbiana**, Pfr. (*Achatinella*.) Proc. Zool. Soc. pl. 30, f. 14—1855.

†*Bulimella fuscobasis*, Smith. Proc. Zool. Soc. pl. 9, f. 15—1873.

*Bulimella Sowerbiana*, Pfr. Mall. Blätt. 163—1856. *Oahu.*

†**B. subvirens**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 22, f. 21—1853.

*Bulimella viridans*, Pfr. Mall. Blätt. 163—1856. Non Mighls.

*Bulimella subvirens*, Pse. Proc. Zool. Soc. 646—1869.

*Niu, Oahu.*

†**B. taeniolata**, Pfr. (*Achatinella*.) Proc. Zool. Soc. 38—1846.

*Achatinella rubiginosa*, Newc. Proc. Zool. Soc. pl. 24, f. 59—1853.

*Bulimella taeniolata*, Pfr. Mall. Blätt. 124—1854, 163—1856.

*Palolo, Oahu.*

†**B. terebra**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 23, f. 40—1853.

*Achatinella attenuata*, Pfr. Proc. Zool. Soc. pl. 30, f. 12—1855.

*Achatinella lignaria*, Gul. Ann. Lyc. N. Y. pl. 7, f. 35. (Var.)

*Achatinella crocea*, Gul. Ann. Lyc. N. Y. pl. 7, f. 36.

*Bulimella attenuata*, Pfr. Nom. Helic. Viv. 307—1881.

*Bulimella terebra*, Pse. Proc. Zool. Soc. 648—1869.

*Waialuku, Maui.*

*Obs.* I have followed Dr. Newcomb in referring Mr. Gulick's species to *terebra*, it varies in size and color; some are attenuate while others are large and inflated.

†**B. viridans**, Migh. (*Achatinella*.) Proc. Bost. Soc. Nat. Hist. Jan'y 1845.

*Achatinella radiata*, Pfr. Proc. Zool. Soc. Aug. 1845.

*Achatinella cuneus*, Pfr. Proc. Zool. Soc. 205—1855. Sinistral.

*Achatinella rutila*, Pfr. Var.  $\beta$ . Mall. Blätt. 1854. Non Newc.

*Achatinella subvirens*, Pfr. Var.  $\beta$ . (Non Newc.) Mall. Blätt. 1854.

*Achatinella decipiens*, Pfr. Var.  $\beta$ . (Non Newc.) Mall. Blätt. 1854.

*Bulimella viridans*, Pse. Proc. Zool. Soc. 646—1868.

*Kouahuanui, Oahu.*

Section **ACHATINELLASTRUM**, Dr. L. Pfeiffer.

†**A. adusta**, Rve. (**Achatinella**). Mon. tab. 4, f. 30-1850.

*Achatinellastrum adusta*, Pfr. Mall. Blätt. 138-1854.=164-1856.  
Oahu.

†**A. ampla**, Newc. (**Achatinella**). Proc. Zool. Soc. tab. 22, f. 19-1853.

*Achatinellastrum ampla*, Pfr. Mall. Blätt. 135-1854.-164-1856.  
Kolau Oahu.

†**A. bella**, Rve. (**Achatinella**). Mon. Tab. 3, f. 17-1850.

*Achatinellastrum bella*, Pfr. Mall. Blätt. 135-1854.-165-1856.

*Achatinellastrum pulcherrimum*, Pfr. Mon. Helic. B. ii, 237.?

*Laminella bella*, Rve.=*Polita*, Newc. Pse. Proc. Zool. Soc. 648-1869.  
Molokai.

†**A. bellulae**, Smith. (**Achatinellastrum**). Proc. Zool. Soc. t. 9, f. 8-1873.

Sandwich Islands.

†**A. Buddii**, Newc. (**Achatinella**). Proc. Zool. Soc. Tab. 9, f. 8-1873.

*Achatinella peza*, Gul. Ann. Lyc. N. Y. 196-pl. 6, f. 26-1856.

†*Achatinella plumata*, Gul. Ann. Lyc. N. Y. 217. pl. 7 f. 41-1856.

*Achatinella papyracea*, Gul. Ann. Lyc. N. Y. 207, pl. 8, f. 48, 1856.

*Achatinella caesia*, Gul. Ann. Lyc. N. Y. 234, pl. 8, f. 53, 1856.  
(Junior Ex.)

*Laminella Buddii*, Pfr. Mall. Blätt. 138-1854.

*Achatinellastrum Buddii*, Pfr. Mall. Blätt. 164-1856.

*Achatinellastrum fuscozona*, Smith. Proc. Zool. Soc. pl. 9-f. 9-1873.  
Pololo Oahu.

Obs. This species is very variable in texture and coloration.

†**A. castanea**, Rve. (**Achatinella**). Mon. Tab. 2, f. 24-1850.

*Achatinellastrum castanea*, Pfr. Mall. Blätt. 139-1854.-164-1856.

*Achatinellastrum castanea*, Rve.=*adusta*, Rve. (Pse). Proc. Zool. Soc. 646-1869.  
Oahu.

†**A. colorata**, Rve. (**Achatinella**). Mon. Tab. 3, f. 18-1850.

*Achatinellastrum colorata*, Pfr. Mall. Blätt. 134-1854.

*Laminella colorata*, Pfr. Mall. Blätt. 164-1856.

*Laminella ustulata*, Newc. M. S. (Pfr.) Mall. Blätt. 136-1854.

*Bulinella colorata*, Pse. Proc. Zool. Soc. 646-1869.

*Achatinellastrum colorata*, Pfr. Nomen. Helic. Viv. 308-1881.

Ahuimanu Oahu.

†**A. concinna**, Newc. (**Achatinella**). Proc. Zool. Soc. Pl. 24, f. 79-1853.

*Achatinellastrum concinna*, Pfr. Mall. Blätt. 137-1854.-164=1856.

*Laminella concinna*, Pse. Proc. Zool. Soc. 648-1869.

*Lanai.*

†**A. consanguinea**, Smith. (**Achatinella**). Proc. Zool. Soc. Pl. 9, f. 3-1873.

*A. concolor*, Smith. Proc. Zool. Soc. Pl. 9, f. 1-1873.

*Ahuimanu, Oahu.*

*Obs.* These two species of Mr. Smith, are probably only varieties of *colorata*.

†**A. cucumis**, Gul. (**Achatinella**). Ann. Lyc. N. Y. pl. 7, f. 45-1858.

*Achatinellastrum cucumis*, Pse. Proc. Zool. Soc. 646-1869,

*Kaliua, Oahu.*

**A. formosum**, Gul. (**Achatinella**). Ann. Lyc. N. Y. pl. 8, f. 55-1858.

*Achatinellastrum formosum*, Pse. Proc. Zool. Soc. 646-1869.

*Oahu.*

†**A. fulgens**, Newc. (**Achatinella**). Proc. Zool. Soc. pl. 22, f. 24-24a, 1853.

*Achatinella diversa*, Gul. Ann. Lyc. N. Y. 222-1858. (Junior Ex.)

†*Achatinellastrum angusta*, Smith. Proc. Zool. Soc. 74, pl. 9, f. 7-1873.

*Achatinellastrum fulgens*, Pfr. Mall. Blätt. 137-1854, 164-1856.

*Waialua, south east end of Oahu.*

†**A. fuscolineata**, Smith. (**Achatinellastrum**). Proc. Zool. Soc. 75, pl. 9, f. 2-2a-1873.

*Achatinellastrum fuscolineatum*, Pfr. Nomen. Helic. Viv, 307-1881.

*Kaialua, Oahu.*

*Obs.* A large quantity of duplicates of this species was contained in the collection of Wm. H. Pease. Mr. Smith designates *versipellis* Gul. as its nearest affinity, while Dr. Newcomb thinks it is one of the innumerable varieties of *vulpina* Fér.

†**A. fuscozona**, Smith. (**Achatinellastrum**). Proc. Zool. Soc. pl. 9, f. 9-1873.

*Makiki and Palolo, Oahu.*

*Obs.* Judging from a suite of all ages, this may be a good species, although it approaches very near to *fuscolineata*, Smith.

†**A. germana**, Newc. (**Achatinella**). Proc. Zool. Soc. pl. 24, f. 62-1863.

*Achatinellastrum germana*, Pfr. Mall. Blätt. 135-1854, 156-1856.

*Bulimella germana*, Pse. Proc. Zool. Soc. 649-1869.

*Makawao, Maui.*

†**A. Johnsoni**, Newc. (**Achatinella**.) Proc. Zool. Soc. pl. 23, f. 50-1853.

*Achatinella aplustre*, Newc. Proc. Zool. Soc. pl. 23, f. 51-1853.

*Achatinellastrum Johnsoni*, Pfr. Mall. Blätt. 134-1854.

*Palolo Crater and Kolau, Oahu.*

**A. lilaceum**, Pfr. (**Achatinella**.) Mon. Helic. Viv. vi 173.

*Achatinellastrum lilaceum*, Pfr. Nomen. Helic. Viv. 308, 1881.

*Sandwich Islands.*

†**A. ligatum**, Smith. (**Achatinellastrum**.) Proc. Zool. Soc. t. 9, f. 13-1873.

*A. diluta*, Smith. Proc. Zool. Soc. t. 9, f. 14-1873.

*Waimula, Oahu.*

*Obs.* Examples of the above in the Pease collection marked "new species" equal a dextral variety of *ulpina*, Fér.

†**A. Nattii**, Baldw. Nobis. (**Achatinellastrum**.) pl. I, f. 3.

Shell dextral, turbinate, spire half the length; whorls 5, polished, the two last rapidly enlarged and inflated. Suture impressed, columella yellow, stout and twisted. Color bright gamboge yellow, with one white and three wide chestnut bands beneath the suture, the latter visible from within the aperture; aperture round ovate, white, labium white, slightly thickened within, L. 16, D. 10, L. Ap 8, D. 5 mill.

*Makawao, E. Maui.*

*Obs.* This shell was found at the above locality by D. D. Baldwin, Esq. of Lahaina Maui, who has devoted much time and attention to the *Achatinella* of the Sandwich Islands. He has known of similar examples being found at the same locality. The shell is not quite mature, and at first sight has the facies of an *Apev*.

†**A. olivaceum**, Rve. (**Achatinella**.) Mon. tab. 3, f. 20-1850.

*Achatinella prasinus*, Rve. Mon. Tab. 4, f. 27.

*Achatinellastrum olivaceum*, Pfr. Mall. Blätt. 138-1854, 164-1856.

*Sandwich Islands.*

†**A. polita**, Newc. (**Achatinella**.) Proc. Zool. Soc. pl. 23, f. 37-1853.

*Achatinellastrum polita*, Pfr. Mall. Blätt. 134-1854, 164-1856.

*Laminella polita*, = *bella*, Pse. Proc. Zool. Soc. 648-1869.

*Molokai.*

*Obs.* *Polita* Newc. and *bella* Rve. are doubtless distinct.

†**A. productum**, Rve. (**Achatinella**.) Mon. tab. 2, f. 13-1850.

*Achatinella venulata*, Newc. Proc. Zool. Soc. pl. 23, f. 48-1853.

*Achatinella hybrida*, Newc. Proc. Zool. Soc. pl. 22, f. 52-1853.

*Achatinella bilineata*, Rve. Mon. Tab. 3, f. 22.

*Achatinella Dunkeri*, Cum. (Pfr.) Proc. Zool. Soc. 208-1855.

*Achatinellastrum productum*, Pfr. Mall. Blätt. 134-1854, 163  
—1856. *Kolau, Oahu.*

†**A. pulcherrimum**, Swains. (*Achatinella*.) Zool. Illus. pl. 123, f. 2.

*Achatinella napus*, Pfr. Proc. Zool. Soc. f. 19-1855.

*Achatinella mahogani*, Gul. Ann. Lyc. N. Y. f. 72-1858.

*Laminella pulcherrima*, Pfr. Mall. Blätt. 135-1854.

*Achatinellastrum pulcherrima*, Pfr. Mall. Blätt. 164-1856.

*Ahonui, Oahu.*

†**A. trilineatum**, Gul. (*Achatinella*.) Ann. Lyc. N. Y. pl. 7, f. 46-1858.

*Achatinella zonata*, Gul. Ann. Lyc. N. Y. pl. 8, f. 58-1858, (var.)

*Achatinellastrum trilineatum*, Pse. Proc. Zool. Soc. 646-1869.

*Oahu.*

†**A. versipellis**, Gul. (*Achatinella*.) Ann. Lyc. N. Y. vi, pl. 7, f. 44a, b.

*Achatinellastrum versipellis*, Pse. Proc. Zool. Soc. 646-1869.

*Kailua, Oahu.*

†**A. vulpinum**, Fér. (*Helix*.) Hist. Mol. tab. 155, f. 1.

*Achatinella vulpina*, Rve. Mon. Tab. 4, f. 29.

*Achatinella livida*, Pfr. Non Swains.

*Achatinella Stewartii*, Green. Maclur. Lyc. i, pl. 4, f. 1-2.

*Achatinella Stewartii*, Rve. Mon. tab, 4, f. 26,

*Achatinella virens*, Gul. Ann. Lyc. N. Y. vj, f. 47.

*Achatinella varia*, Gul. Ann. Lyc. N. Y. vj f. 43.

*Achatinella crassidentata*, Pfr. Proc. Zool. Soc. pl. 30, f. 23-1855.

*Achatinellastrum tricolor*, Smith. Proc. Zool. Soc. pl. 9, f. 6-1873.

*Achatinellastrum ligatum*, Smith. Proc. Zool. Soc. pl. 9, f. 12-13,  
1873. (Dextral var?)

*Achatinellastrum longispira*, Smith. Proc. Zool. Soc. pl. 9, f. 2-  
1873. (Var. *Stewartii*.)

*Eburnella vulpina*, Pfr. Mall. Blätt. 139-1854.

*Achatinellastrum vulpinum*, Pfr. Mall. Blätt. 139-1854.

*Oahu.*

**A. zebra**, Newc. (*Achatinella*.) Ann. Lyc. N. Y. 142-1853.

*Achatinellastrum zebra*, Pfr. Nomen. Helic. Viv. 308-1881.

*Laminella zebra*, Pse. Proc. Zool. Soc. 648-1869.

*East Maui.*

Section **EBURNELLA**, Wm. H. Pease.

†**E. casta**, Newc. (**Achatinella**). Proc. Zool. Soc. tab. 22, f. 12-1853.

*Achatinella dimorpha*, Gul. Ann. Lyc. N. Y. pl. 8, f. 56-1858.

*Achatinella juncea*, Gul. Ann. Lyc. N. Y. pl. 7, f. 49-1858.  
(Dwarf.)

*Achatinella cognata*, Gul. Ann. Lyc. N. Y. pl. 7, f. 60-1858

*Achatinellastrum casta*, Pfr. Mall. Blätt. 138-1854, -164-1856.

*Eburnella casta*, Pse. Proc. Zool. Soc. 647-1869.

*Ewa, Oahu.*

Obs. I have followed Dr. Newcomb in assigning Mr. Gulick's species to *casta*, Mr. Gulick admits *E. dimorpha* as a synonym, see Proc. Zool. Soc. 90-91-1873.

†**E. curta**, Newc. (**Achatinella**). Proc. Zool. Soc. tab. 23, f. 43-1853.

†*Achatinella delta*, Gul. Ann. Lyc. N. Y. 231, pl. 8, f. 50-1858.

*Achatinella contracta*, Gul. Ann. Lyc. N. Y. 237, pl. 8, f. 57,  
1858.

†*Achatinellastrum rhodoraphe*, Smith. Proc. Zool. Soc. 74, pl. 9,  
f. 10-1873.

*Eburnella pygmea* Smith. Proc. Zool. Soc. 75, pl. 9, f. 11-1873.

*Laminella curta*, Pfr. Mall. Blätt. 139-1854.

*Achatinellastrum curta*, Pfr. Mall. Blätt. 164-1856.

*Eburnella curta*, Pse. Proc. Zool. Soc. 647-1869.

*Waialua, Oahu.*

Obs. In a large number of duplicates, contained in the collection of the late Wm. H. Pease, the above synonymy was illustrated.

†**E. livida**, Swains. (**Achatinella**). Zool. Illus. p. 108, f. 2.

†*Achatinella viridans*, Rve. Mon. Tab. 4, f. 25. (Non Migh.)

*Achatinella Reevii*, C. B. Adams. Conch. Cont. 128.

†*Achatinella Emersonii*, Newc. Proc. Zool. Soc. pl. 24, f. 74-1853.

*Achatinella glauca*, Gul. Ann. Lyc. N. Y. f. 47-1858.

*Eburnella livida*, Pse. Proc. Zool. Soc. 647-1869.

*Kalaikoa and Waialua, Oahu.*

Obs. About two quarts of duplicates, in the collection of Wm. H. Pease, exhibited considerable inosculation of the above so called species, *A. vulpina* Fer. which Dr. Pfeiffer places under *Eburnella* as a synonym of *livida* Swains, has no affinity therewith.

†**E. porcellana**, Newc. (**Achatinella**). Proc. Zool. Soc. pl. 23, f. 27-1863.

*Bulimella porcellana*, Pfr. Mall. Blatt. 123-1854.

*Eburnella porcellana* Pse. Proc. Zool. Soc. 647-1869.

*East Maui.*

†*E. recta*, Newc. (*Achatinella*). Proc. Zool. Soc. pl. 22, f. 45-1853.

*Laminella recta*, Pfr. Mall. Blätt. 136-1854.

*Achatinella nympha*, Gul. Ann. Lyc. N. Y. 251, pl. 8, f. 9-1858.

*Eburnella recta*, Pse. Proc. Zool. Soc. 647-1869.

*Waialua, Oahu.*

*E. saccata*, Pfr. (*Achatinella*). Mon. Helic. vj.-175.

*Eburnella saccata*, Pse. Proc. Zool. Soc. 647-1869.

*Sandwich Islands.*

*E. semicarinata*, Newc. (*Achatinella*). Proc. Zool. Soc. pl. 24, f. 76-1853.

*Bulimella semicarinata*, Pfr. Mall. Blätt. 124-1854.

*Eburnella semicarinata*, Pfr. Nomen. Helic. Viv. 309-1881.

*Lanai.*

†*E. undulata*, Newc. (*Achatinella*). Bost. Jour. Nat. Hist. 218-1855. Amer. Jour. Conch. pl. 13, f. 15-1866.

*Laminella curta*, Pfr. Mall. Blätt. 139-1854.

*Achatinellastrum curta*, Pfr. Mall. Blätt. 164-1856.

*Eburnella curta*, Pse. Proc. Zool. Soc. 647-1869.

*Waialua, Oahu.*

*Obs.* I think this a variety of *E. curta*, Newc.

†*E. variabilis*, Newc. (*Achatinella*). Proc. Zool. Soc. pl. 24, f. 70-1853.

*Achatinella fulva*, Newc. Proc. Zool. Soc. 208-1855.

*Achatinella lactea*, Gul. Ann. Lyc. N. Y. pl. 6, f. 27-1856.

*Bulimella variabilis*, Pfr. Mall. Blätt. 124-1854.

*Eburnella variabilis*, Pse. Proc. Zool. Soc. 647-1869.

*Lanai.*

#### Section APEX, \* Albers.-1860.

\*The species of the Section Apex, are involved in almost inextricable confusion. Authors in many instances, have not given the localities of the species, and the great variability in size and color of many species, added to the many intermediate varieties, entails an almost endless task to separate them. To arrive at a certainty, the color of the animal and mantle must be observed, and local suites should be collected by which critical comparisons could be instituted. It is to be regretted, that species have been multiplied on slight grounds. In my endeavours to arrive at a correct synonymy, I may have erred by restricting the species within too narrow limits, which will be for future observers to correct. The Section Apex exhibits four prevailing types, as illustrated by the species *turgida*, *mustellina*, *per-versa* and *Swifitii*, from which all others seem but modifications.

†*A. cestus*, Newc. (*Achatinella*). Proc. Zool. Soc. t. 22, f. 8-1853.

*Bulimella cestus*, Pfr. Mall. Blätt. 125-1854.

*Helicter cestus*, Pse. Proc. Zool. Soc. 645-1869.

*Apex cestus*, Pfr. Proc. Zool. Soc. 310.

*Palolo, Oahu.*



†**A. concavospira**, Pfr. Proc. Zool. Soc. 36-1859.

*Laminella concavospira*, Pse. Proc. Zool. Soc. 648-1869.

*Achatinellastrum concavospira*, Pse. Nomen. Hel. Viv. 307.

*Sandwich Islands.*

†**A. decora**, Fer. (**Helix**). Hist. Moll. t. 155, f. 5-7.

*Achatinella decora*, Gray.

*Bulinus decorus*, Beck, and Anton.

*Achatinella vestita*, Migh. Proc. Bost. Soc. 1845.

*Achatinella lugubris*, Pfr. Non. Rve.

*Achatinella vittata*, Pfr. Non. Rve.

*Achatinella simulans*, Pfr. Non. Rve.

*Laminella decora*, Pfr. Mall. Blätt. 140-1854.

*Helicter decora*, Pse. Proc. Zool. Soc. 645-1869.

*Apex decora*, Pfr. Nomen. Hel. Viv. 310.

*Kaliakoa and Ahouin, Oahu.*

†**A. flavida**, Gul. (**Apex**). Proc. Zool. Soc. pl. 10, f. 1-1873.

*Apex tuberans*, Gul. Proc. Zool. Soc. pl. 10, f. 3-1873.

*Kaliakao, Ahouin and Waialua, Oahu.*

*Obs.* This shell may=dextral *Swiftii* which often varies greatly in color.

†**A. Gulickii**, Smith. (**Apex**). Proc. Zool. Soc. pl. 9, f. 7-1873.

†*Apex albofasciata*, Smith. Proc. Zool. Soc. pl. 9, f. 29-1873.

†*Apex innotabilis*, Smith. Proc. Zool. Soc. pl. 9, f. 23-1873.

†*Apex neglectus*, Smith. Proc. Zool. Soc. pl. 9, f. 22-1873.

†*Apex coniformis*, Gul. Proc. Zool. Soc. pl. 9, f. 17-1873.

†*Apex versicolor*, Gul. Proc. Zool. Soc. pl. 9, f. 18-1873.

*Kalikoia and Ahouin, Oahu.*

*Obs.* About two quarts of the variety *albofasciata* was represented in the Pease collection. As I possess the other varieties, I can see no difference in them. Dr. Newcomb places the above with *perversa* of which he considers them only varieties.

†**A. lorata**, Fer. (**Helix**). Hist. Moll. t. 155, f. 9-10.

†*Achatinella pallida*, Nutt. Rves. Mon. pl. 1, f. 2a 2b.

*Achatinella alba*, Nutt. Jays Cat.

*Helicteres loratus*, Beck and Anton.

†*Achatinella ventrosa*, Pfr. Proc. Zool. Soc. 6-1855.

*Achatinella nobilis*, Pfr. Proc. Zool. Soc. 220-1855.

*Achatinellastrum lorata*, Pfr. Mall. Blätt, 134-1854.

*Bulinella lorata*, Pfr. Mall. Blätt, 163-1856.

*Helicter lorata*, Pse. Proc. Zool. Soc. 645-1869.

*Sandwich Islands.*

*Obs.* *Lorata* and *alba* represent the elongate varieties, and *ventrosa* with *nobilis* the short and inflated varieties.

†**A. lugubris**, Chem. (*Turbo*.) No. 2059-60, t. 8, f. 9-10.

*Achatinella pica*, Swains. Zool. Ill. pl. 99, f. 1.

*Monodonta seminigra*, Lam. vii-37.

*Bulimus seminigra*, Menke. Syn. 26.

*Helix apex-fulva*, Dix, Voyage around the World, 1789.

*Helix lugubris*, Fér. Hist. Moll. t. 155, f. 8.

*Helicter lugubris*, Beck.

*Achatina lugubris*, Gray.

*Achatinella lugubris*, Pfr. 1841.

*Achatinellastrum lugubris*, Pfr. Mall. Blätt, 140-1854, 164-1856.

*Helicter lugubris*, Pse. Proc. Zool. Soc. 645-1869.

*Apex lugubris*, Pfr. Nomen. Hel. Viv. 310, 1881.

*Apex bicolor*, Gul. Mon. Hel. Viv. 529.

*Apex polymorpha*, Gul. Proc. Zool. Soc. t. 10, f. 5-1873.

*Apex leucozonus*, Gul. Proc. Zool. Soc. t. 10, f. 6-1873.

*Oahu.*

†**A. mustellina**, Migh. (*Achatinella*.) Pro. Bost. Soc. 21-1845, Rve. Mon. t. 3, f. 20-21a.

*Bulimella mustellina*, Pfr. Mall. Blätt, 125-1854, 163-1856.

*Helicter mustellina*, Pse. Proc. Zool. Soc. 645-1869.

*Apex mustellina*, Pfr. Nomen. Hel. Viv. 309.

*Waianea, Oahu.*

**A. ovum**, Pfr. (*Achatinella*.) Proc. Zool. Soc. 336-1856.

*Helicter ovum*, Pfr. Proc. Zool. Soc. 645-1869.

*Apex ovum*, Pfr. Nomen. Hel. Viv. 310.

*Oahu.*

†**A. perversa**, Swains. (*Achatinella*.) Zool. Ill. pl. 99, f. 2.

*Achatinella concidens*, Gul. Ann. Lyc. N. Y. pl. 8, f. 54.

*Achatinella cinnamomea*, Pfr. Proc. Zool. Soc. 22-1858.

*Apex leucophea*, Gul. Proc. Zool. Soc. pl. 9, f. 16-1873.

*Helicter perversa*, Pse.=*cinerosa*, Pfr. Proc. Zool. Soc. 645-1869.

*Apex decora*, Pfr. Var. Nomen. Hel. Viv. 310.

*Waianea, Oahu.*

*Obs.* Dr. Newcomb remarks, "there are several varieties of this species, one of which has a near affinity to *decora* which has led to their having been confounded with each other."

†**A. pulchella**, Pfr. (*Achatinella*.) Proc. Zool. Soc. t. 30, f. 2-1855.

*Helicter pulchella*, Pse. Proc. Zool. Soc. 645-1869.

*Apex pulchella*, Pfr. Nomen. Hel. Viv. 310.

*Sandwich Islands.*

†**A. simulans**, Rve. (**Achatinella**.) Mon. pl. 2, f. 15.

*Achatinella decora*, Pfr. Mon. Hel. iv, 528. (Non Fér.)

*Bulimella simulans*, Pfr. Mall. Blätt, 125-1854, 163-1856.

*Apex tumefactus*, Gul. Proc. Zool. Soc. pl. 9, f. 20-1873.

*Apex simulans*, Pfr. Nomen. Hel. Viv. 310.

*Wahiawa, Oahu.*

†**A. Swiftii**, Newc. (**Achatinella**.) Proc. Zool. Soc. pl. 22, f. 9-1853.

*Achatinella apicata*, Newc. Proc. Zool. Soc. 210-1855.

*Achatinella valida*, Pfr. Proc. Zool. Soc. pl. 30, f. 54-1855.

*Bulimella apicata*, Pfr. Mall. Blätt, 125-1854.

*Helicter Swiftii*, Pse. Proc. Zool. Soc. 645-1869.

*Apex Swiftii*, Pfr. Nomen. Hel. Viv. 310.

*Apex flavidus*, Gul. Proc. Zool. Soc. pl. x, f. 1-1, a-1873.

*Apex lilacea*, Gul. Proc. Zool. Soc. pl. x, f. 4-1873.

*Apex leucoraphe*, Gul. Proc. Zool. Soc. pl. x, f. 2-1873.

*Ewa, Oahu.*

†**A. turgida**, Newc. (**Achatinella**.) Proc. Zool. Soc. pl. 22, f. 10-1853.

*Achatinellastrum turgida*, Pfr. Mall. Blätt, 138-1854, 164-1856.

*Apex turgida*, Pfr. Nomen. Hel. Viv. 310.

†*Apex turbiniformis*, Gul. Proc. Zool. Soc. pl. x, f. 7-1873.

*Apex albospira*, Gul. Proc. Zool. Soc. pl. x, f. 8-1873.

*Ahouni, Oahu.*

*Obs.* The two species of Mr. Gulick seem to be dextral varieties of *turgida*.

†**A. vittata**, Rve. (**Achatinella**.) Mon. No. 9, Mus. Cuning. (Newc.)

*Achatinella decora*, Pfr. Var. Non. Fér. Mon. Hel. iii-465.

*Achatinella globosa*, Pfr. Proc. Zool. Soc. pl. 30, f. 25-1855.

*Helicter globosa*, Pse. Proc. Zool. Soc. 645-1869.

*Apex vittata*, Rve. Nomen. Helic. Viv. 310.

*Sandwich Islands.*

#### Section **PERDICELLA**, Wm. H. Pease.

†**P. Helena**, Newc. (**Achatinella**.) Proc. Zool. Soc. pl. 24, f. 63-1853.

*Newcombia Helena*, Pfr. Mall. Blätt. 117-1854.

*Perdicella Helena*, Pse. Proc. Zool. Soc. 648-1869.

*Molokai.*

†**P. Mauiensis**, Newc. (**Achatinella**.) Proc. Zool. Soc. 207-1855. Amer. Jour. Conch. pl. 13, f. 16-1866.

*Partulina Mauiensis*, Gul. Proc. Zool. Soc. 91-1873.

*Perdicella Mauiensis*, Pfr. Nomen. Helic. Viv. 315-1881.

*Maui.*

**P. minuscula**, Pfr. (*Perdicella*). Mon. Helic. Viv. iv. 562.

*Perdicella minuscula*, Pse. Proc. Zool. Soc. 648-1869.

*Sandwich Islands.*

†**P. ornata**, Newc. (*Achatinella*). Proc. Zool. Soc. pl. 24, f. 55-1853.

*Newcombia ornata*, Pfr. Mall. Blätt. 118-1854.-165-1856.

*Perdicella ornata*, Pse. Proc. Zool. Soc. 648-1869.

*Mauai.*

**P. zebrina**, Pfr. (*Achatinella*). Proc. Zool. Soc. 202-1855.

*Newcombia zebrina*, Pfr. Mall. Blätt. 165-1856.

*Perdicella zebrina*, Pse. Proc. Zool. Soc. 648-1869.

*Sandwich Islands.*

#### Section **NEWCOMBIA**, Dr. L. Pfeiffer.

†**N. cinnamomea**, Pfr. (*Achatinella*). Proc. Zool. Soc. 22-1858.

*Newcombia cinnamomea*, Pfr. Mall. Blätt. 230-1853.

*Molokai.*

†**N. Cumingii**, Newc. (*Achatinella*). Proc. Zool. Soc. pl. 24, f. 59-1853.

*Newcombia Cumingii*, Pfr. Mall. Blätt. 118-1854.-165-1856.

*Halea-Kala, Mauai.*

†**N. Newcombia**, Pfr. (*Bulimus*). Mall. Blatt. 119-1854.-165-1856.

*Achatinella Pfeifferi*, Newc. Proc. Zool. Soc. pl. 24, f. 58-1853.

*Molokai.*

†**N. plicata**, Migh. (*Achatinella*). Proc. Bost. Soc. -1848. Rve. Mon. pl. 6, f. 44.

*Bulimus liratus*, Pfr. Mon. Helic. Viv. ii, 235.

*Newcombia liratus*, Pfr. Mall. Blätt. 165-1856.

*Molokai.*

**N. Philippiana**, Pfr. (*Achatinella*). Mon. Helic. Viv. iv, 559.

*Newcombia philippiana*, Pfr. Nomen. Helic. Viv. 315-1881.

*Sandwich Islands.*

†**N. sulcata**, Pfr. (*Achatinella*). Proc. Zool. Soc. 22-1858.

*Newcombia sulcata*, Pse. Proc. Zool. Soc. 649-1869.

#### Section **LABIELLA**, Dr. L. Pfeiffer.

**L. callosa**, Pfr. (*Achatinella*). Mon. Helic. Viv. iv. 531.

*Labiella callosa*, Pse. Proc. Zool. Soc. 651-1869.

*Oahu.*

†**L. labiata**, Newc. (*Achatinella*). Proc. Zool. Soc. pl. 23, f. 33-1853.

*Labiella dentata*, Pfr. Proc. Zool. Soc. pl. 30, f. 27-1855.

*Achatinella legena*, Gul. Ann. Lyc. N. Y. pl. 6, f. 3-1855.

(=var.)

*Labiella dentata*, Pfr. Mall. Blätt. 142-163.-1856.

*Lehui, Oahu.*

**L. pachystoma**, Pse. (*Labiella*). Jour. Conch. xvij, 171-1869.

*Kauai.*

Section **LAMINELLA**, Dr. L. Pfeiffer.

†**L. Alexandria**, Newc. (*Achatinella*.) Cal. Nat. Hist. Soc. iii-182-1865.

*Achatinella Alexandria*, Newc. Amer. Jour. Conch. pl. 13, f. 14-1866.

*Perdicella Alexandri*, Pse. Proc. Zool. Soc. 648-1869.

*Laminella Alexandri*, Pfr. Nomen. Helic. Viv. 312-1881.

*West Maui.*

†**L. citrina**, Migh. MS. (*Achatinella*.)

*Achatinella citrina*, Rve. Mon. tab 5, fig. 33-1850.

*Laminella citrina*,= *venusta*, Pse. var. Proc. Zool. Soc. 648-1869.

*Laminella citrina*, Pfr. Nomen. Helic. Viv. 312-1881.

*Oahu.*

**L. erecta**, Pse. (*Laminella*.) Jour. Conch. xvij-174-1869.

*Maui.*

†**L. fusioidea**, Newc. (*Achatinella*.) Amer. Jour. Conch. ii, pl. 13, f. 8-1866.

*Achatinellastrum fusioidea*, Pfr. Nomen. Helic. Viv. 309.

*Laminella fusioidea*, Pse. Proc. Zool. Soc. 648-1869.

*Maui.*

†**L. gravida**, Fér. (*Helix*.) Hist. Moll. tab 155, f. 3.

*Achatinella Dimondii*, C. B. Adams. Conch. Cont. 126.

*Laminella gravida*, Pfr. Mall. Blätt, 126-1854, 164-1856.

*Sandwich Islands.*

**L. lutcola**, Fér. (*Helix*.) Hist. Moll. tab 155, f. 12.

*Bulimus lutcolus*, Pfr. Mon. Helic. ii, 234-1841.

*Amastrea turritella*, Fér.= *lutcola*, Fér. (Pse.) Proc. Zool. Soc. 650-1869.

*Laminella lutcola*, Pfr. Nomen. Hel. Viv. 312-1881.

*Sandwich Islands.*

*Obs.* The small yellow shell figured by Férussac as *lutcola*, has never been identified by conchologists.

**L. Mighelsiana**, Pfr. (*Achatinella*.) Proc. Zool. Soc. 231-1849.

*Laminella Mighelsiana*, Pfr. Mall. Blätt, 136-1854.

*Achatinellastrum Mighelsiana*, Pfr. Nomen. Helic. Viv. 308-1881.

*Laminella Mighelsiana*, Pse. Proc. Zool. Soc. 648-1869.

*Molokai.*

†**L. physa**, Newc. (*Achatinella*.) Pro. Bost. Soc. 218-1853. Proc. Zool. Soc. pl. 24, f. 64-1853. (Junior.) Amer. Jour. Conch. ii, pl. 13, f. 10 (adult).

*Newcombia physa*, Pfr. Mall. Blätt, 117-1854, 165-1856.

*Laminella physa*, Pse. Proc. Zool. Soc. 648-1869.

*Hawai.*

*Obs.* Mr. Pease observes, "this shell has no distinct allies" however he places it amongst the *Laminella* to which I assent. This is an instance which exhibits the difficulties in many of the attempts to classify these heterogeneous forms.

†**L. picta**, Mighl. (*Achatinella*.) Proc. Bost. Soc. January 1845.

*Achatinella bulbosa*, Gul. Ann. Lyc. N. Y. pl. 8, f. 71-1858.

*Achatinella picta*, Rve. Mon. tab 67, f. 28.

*Laminella picta*, Pse. Proc. Zool. Soc. 648-1869.

*East Maui.*

**L. Remyi**, Newc. (*Achatinella*.) Ann. Lyc. N. Y. 146-1855. Amer. Jour. Conch. pl. 13, f. 13-1866.

*Laminella Remyi*, Pfr. Mall. Blätt, 165-1856.

*Lanai.*

†**L. sanguinea**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 22, f. 15-1853.

*Achatinella Férussaci*, Pfr. (var.) Mon. Helic. Viv. iv, 546.

*Laminella Férussaci*, Pfr. Mall. Blätt, 164-1856.

*Laminella sanguinea*, Pfr. Mall. Blätt, 156-1854,

*Lehui, Oahu.*

†**L. straminea**, Rve. (*Achatinella*.) Mon. pl. 5, f. 38.

*Laminella straminea*, Pfr. Mall. Blätt, 126-1854.

*Sandwich Islands.*

*Obs.* This shell in the collection of the Jardin des Plants, is labelled *A. grvida*, Fér. var.; it is certainly distinct from *grvida*.

†**L. subrostrata**, Pfr. (*Achatinella*.) Proc. Zool. Soc. p. 31-1839.

*Labiella subrostrata*, Pse. Proc. Zool. Soc. 651-1869.

*Laminella subrostrata*, Pfr. Nomen. Helic. Viv. 314-1881.

*Oahu.*

*Obs.* My examples of this species, obtained in London, and said to have been compared with the type, equals *albolabris* Newc. and is an *Amastra*.

**L. tetrao**, Newc. (*Achatinella*.) Amer. Jour. Conch. ii, pl. 13, f. 11-12-1866.

*Laminella tetrao*, Pfr. Nomen. Helic. Viv. 314-1881.

*Lanai.*

†**L. venusta**, Mighl. (*Achatinella*.) Proc. Bost. Soc. 21-1825.

*Laminella venusta*, Pfr. Mall. Blätt, 127-1854.

*Laminella venusta*, = *citrina*, Mighl. Pse. Proc. Zool. Soc. 648-1869.

*West Molokai.*

**L. zebra**, Newc. (*Achatinella*.) Ann. Lye. N. Y. 142-1855.

*Achatinellastrum zebra*, Pfr. Nomen. Hel. Viv. 308.

*Laminella zebra*, Pse. Proc. Zool. Soc. 648-1869.

*Maui.*

Section **AMASTRA**, H. and A. Adams.

**A. accincta**, Gld. (*Achatina*.) Proc. Bost. Soc. 20-1845. Gld. Expt. Sh. tab. 7, f. 97.

*Leptachatina accincta*, Pse. Proc. Zool. Soc. 650-1869.

*Amastra accincta*, Pfr. Nomen. Hel. Viv. 31-1881.

*Obs.* The figure of this shell in Chemnitz, represents an *Amastra*.

*Oahu.*

†**A. affinis**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 23, f. 35-1853,

†*Achatinella gonistoma*, Pfr. Proc. Zool. Soc. 203-1855.

*Laminella affinis*, Pfr. Mall. Blätt. 165-1856.

*Amastra affinis*, Pse. Proc. Zool. Soc. 650-1869.

†**A. albolabris**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 24, f. 56-1853.

*Achatinella nucleola*, Rve. (Non Gld.) Mon. pl. 5, f. 39.

*Laminella albolabris*, Pfr. Mall. Blätt. 132-1854, 165-1856.

*Labiella albolabris*, Pse. Proc. Zool. Soc. 651-1869.

*Oahu.*

†**A. amicta**, Smith. (*Laminella*.) Proc. Zool. Soc. pl. 10, f. 20-1873.

*Laminella amicta*, Pfr. Nomen. Hel. Viv. 314-1881.

*Sandwich Islands.*

*Obs.* This shell may equal *A. petricola*, Newc.

†**A. Anthonyi**, Newc. (*Achatinella*.) Proc. Cal. Nat. Hist. Soc. ii, p. 93-1860.

Amer. Jour. Conch. ii, pl. 13, f. 2-1866.

*Amastra Anthonyi*, Pse. Proc. Zool. Soc. 649-1869.

*Koloa.*

**A. assimilis**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 23, f. 53-1853.

*Laminella assimilis*, Pfr. Mall. Blätt. 129-1854.

*Amastra assimilis*, Pse. Proc. Zool. Soc. 650-1869.

*Amastra conicospira*, Smith. Proc. Zool. Soc. pl. 10, f. 10-1873.

*East Maui.*

*Obs.* Dr. Pfeiffer considers this species to be a small variety of *A. nubilosa*, Migh.

†**A. biplicata**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 24, f. 75-1853.

*Laminella biplicata*, Pfr. Mall. Blätt. 128-1854, 165-1856.

*Amastra biplicata*, Pse. Var. *Deshaysii* Morelet, Proc. Zool. Soc. 649-1869.

*Lanai.*

**A. brevis**, Pfr. (*Achatinella*.) Mon. Hel. Viv. iii, 558.

*Laminella brevis*, Pfr. Nomen. Hel. Viv. 315-1881.

*Sandwich Islands.*

†**A. crassilabrum**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 23, f. 31-1853.

*Labiella crassilabrum*, Pse. Proc. Zool. Soc. 651-1869.

*Laminella crassilabrum*, Pfr. Mall. Blätt. 130-1854-165-1856.

*Waianea, Oahu.*

†**A. cylindrica**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 22, f. 11-1853.

*Laminella cylindrica*, Pfr. Mall. Blätt. 164-1856.

*Amastra cylindrica*, Pse. Proc. Zool. Soc. 650-1869.

*Waianea, Oahu.*

**A. conifera**, Smith. (*Amastra*.) Proc. Zool. Soc. pl. 10, f. 11-1873.

*Amastra conifera*, Pfr. Nomen. Hel. Viv. 314-1881.

*Kula, East Maui.*

†**A. cornea**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 23, f. 32-1853.

*Laminella cornea*, Pfr. Mall. Blätt. 132-1854, 165-1856.

*Leptachatina cornea*, Proc. Zool. Soc. 651-1869.

*Sandwich Islands.*

*Obs.* Dr. Newcomb pronounces this shell an *Amastra*, in which I concur.

†**A. ellipsoidea**, Gld. (*Achatinella*.) Proc. Bost. Soc. 200-1847. Exped. Sh. tab. 7, f. 96.

*Achatinella decorticate*, Gul. Proc. Zool. Soc. pl. 10, f. 14-1873.

*Achatinella pupoidea*, Newc. Proc. Zool. Soc. pl. 23, f. 42-1853.

*Amastra ellipsoidea*, Pfr. Nomen. Hel. Viv. 311-1881.

*Maui.*

†**A. elliptica**, Gul. (*Amastra*.) Proc. Zool. Soc. pl. 10, f. 15-1873.

*Laminella elliptica*, Pfr. Nomen. Hel. Viv. 313-1881.

*Waianea, Oahu.*

†**A. elongata**, Newc. (*Achatinella*.) Pl. I, f. 9, Ann. Lye. N. Y. 26-1853.

*Achatinella acuta*, Newc. Proc. Zool. Soc. 142-1853.

*Laminella acuta*, Pfr. = *elongata*, Mall. Blätt. 127-1854, 165-1856.

*Helicter Hutchinsonii*, Pse. Proc. Zool. Soc. 7-1862.

*Newcombia Hutchinsonii*, Pse. Proc. Zool. Soc. 649-1869.

*Amastra elongata*, Pse. Proc. Zool. Soc. 649-1869.

*Makawao, Maui.*

*Obs.* Mr. Pease observes, this shell is the analogue of *Amastra obscura*, Newc.; like many other species of *Amastra*, it possesses the



plicate apex of *Laminella*, but wants the spiral striæ, which is the best evidence that it belongs to the section *Amastra*.

†**A. farcimen**, Pfr. (*Achatinella*.) Pl. I, f. 5. Mon. Hel. Viv. iv, 552.

*Laminella farcimen*, Pfr. Nomen. Hel. Viv. 313-1881.

*Amastra farcimen*, Pse. Proc. Zool. Soc. 649-1869.

*Mauï.*

†**A. flavescens**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 24, f. 62-1853.

*Achatinella tenuilabris*, Gul. Proc. Zool. Soc. pl. 10, f. 16-1873.

*Laminella flavescens*, Pfr. Mall. Blätt. 130-1854, 165-1856.

*Amastra flavescens*, Pse. Proc. Zool. Soc. 650-1869.

*Hawaii*, (Baldwin.) *Wanoa, Oahu*, (Newcomb.)

*Obs.* A comparison of types exhibits *A. tenuilabris*, Gul. = *flavescens*, Newc. The latter in the collection of the Jardin des Plantes, is erroneously labelled *A. modesta*, C. B. Adams.

**A. gigantea**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 20, f. 17-1853.

*Laminella violacea*, Pfr. Mall. Blätt. 141-1854.

*Laminella gigantea*, Pfr. Mall. Blätt. 140-1854.

*Laminella gigantea*, = *violacea*, var. Pse. Proc. Zool. Soc. 648-1869.

*Amastra violacea*, Pfr. Mall. Blätt. 164-1856.

*Haleakala, Mauï.*

*Obs.* The only example of *gigantea* ever found is in the British Museum. It probably equals a large example of *A. violacea*, Newc.

†**A. humilis**, Newc. (*Achatinella*.) Ann. Lyc. N. Y. 143-1855. Amer. Jour. Conch. 211, pl. 13, f. 4-1866.

*Laminella humilis*, Pfr. Nomen. Hel. Viv. 313.

*Amastra humilis*, Pse. Proc. Zool. Soc. 649-1869.

*Molokai.*

†**A. intermedia**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 22, f. 13-1853.

*Laminella intermedia*, Pfr. Mall. Blätt. 165-1856.

*Amastra intermedia*, Pse. Proc. Zool. Soc. 650-1869.

*Wainoe, Oahu.*

**A. irregularis**, Pfr. (*Achatinella*.) Mon. Hel. Viv. iv, 564.

*Amastra irregularis*, Pfr. Mall. Blätt. 164-1854.

*Sandwich Islands.*

**A. inflata**, Pfr. (*Achatinella*.) Mon. Hel. Viv. iv, 549.

*Laminella inflata*, Pfr. Nomen. Hel. Viv. 313.

*Amastra inflata*, Pse. Proc. Zool. Soc. 649-1869.

*Sandwich Islands.*

**A. luctuosa**, Pfr. (*Achatinella*.) Proc. Zool. Soc. 204-1855.

*Sandwich Islands.*

†**A. magna**, C. B. Adams. (*Achatinella*.) *Conch. Cont.* 125-1850.

*Achatinella Baldwinii*, Newc. *Proc. Zool. Soc.* pl. 24, f. 72-1853.

*Achatinellastrum Baldwinii*, Pfr. *Mall. Blätt.* 140-1854.

*Amastra Baldwinii*, Pfr. *Mall. Blätt.* 164-1856.

*Laminella Grayana*, Pfr. *Proc. Zool. Soc.* 204-1855. (Junior.)

*Amastra magna*, Pfr. *Nomen. Hel. Viv.* 311-1881.

*Lanai.*

*Obs.* Examples compared with *Grayana*, Pfr. in the British Museum, exhibit *Grayana* as the junior of *magna*. Numerous examples of all ages in the Pease collection, confirm the diagnosis.

**A. malleata**, Smith. (*Amastra*.) *Proc. Zool. Soc.* pl. 10, f. 18-1873.

*Kula, East Maui.*

†**A. Mastersii**, Newc. (*Achatinella*.) *Proc. Zool. Soc.* pl. 24, f. 67-1853.

*A. rubens*, var. Pfr. (non Gould.) *Mon. Helic.* iv, 552.

*Laminella Mastersii*, Pfr. *Mall. Blätt.* 129-1854.

*Amastra Mastersii*, Pse. *Proc. Zool. Soc.* 650-1869.

*Maui.*

†**A. melanosis**, Newc. (*Achatinella*.) *Proc. Zool. Soc.* pl. 23, f. 41-1853.

*Laminella melanosis*, Pfr. *Mall. Blätt.* 132-1854, 165-1856.

*Amastra melanosis*, Pse. *Proc. Zool. Soc.* 650-1869.

*Hawaii.*

†**A. micans**, Pfr. (*Laminella*.) *Pl. I*, f. 10. *Mon. Hel. Viv.* vj, 179,

*Amastra micans*, Pse. *Proc. Zool. Soc.* 650-1869.

*Sandwich Islands.*

†**A. modesta**, C. B. Adams. (*Achatinella*.) *Conch. Cont.* 128-1850.

*Laminella modesta*, Pfr. *Mall. Blätt.* 129-1854, 165-1856.

*Amastra modesta*, Pse. *Proc. Zool. Soc.* 650-1869.

*Molokai.*

**A. moesta**, Newc. (*Achatinella*.) *Proc. Zool. Soc.* pl. 24, f. 77-1853.

*Laminella moesta*, Pfr. *Mall. Blätt.* 128-1854.

*Newcombia obscura*, Newc.=*moesta*, Pse. *Proc. Zool. Soc.* 649-1869.

*Lanai.*

†**A. mucronata**, Newc. (*Achatinella*.) *Proc. Zool. Soc.* pl. 23, f. 49-1853.

*Laminella mucronata*, Pfr. *Mall. Blätt.* 129-1854-165-1856.

*Amastra mucronata*, Pse. *Proc. Zool. Soc.* 650-1869.

*Maui.*

†**A. nigra**, Newc. (*Achatinella*.) *Proc. Bost. Soc.* 219-1855. *Amer. Jour. Conch.* ii, pl. 13, f. 3.

*Amastra nigra*, Pfr. *Mall. Blätt.* 164-1856.

*Maui.*

†**A. nigrolabris**, Smith. (**Amastra**.) Proc. Zool. Soc. pl. 10, f. 11-1873.

*Laminella nigrolabris*, Pfr. Nomen. Hel. Viv. 313-1881.

*Wahiawa, Oahu.*

†**A. nubilosa**, Migh. (**Achatinella**.) Proc. Bost. Soc. 20-1845.

*A. nubilosa*, Rve. Mon. pl. 1, f. 1-1850.

*Laminella nubilosa*, Pfr. Mall. Blätt. 129-1854, 165-1856.

*Amastra nubilosa*, Pse. Proc. Zool. Soc. 650-1869.

*Molokai.*

*Obs.* Dr. Newcomb says *nubilosa* comes from Molokai, while Mighels, Reeve, and Gould give Oahu as the locality. I have never seen a shell that equals in size Dr. Mighels' figure in Reeve's Monograph, and with Dr. Pfeiffer I incline to the opinion that it equals *assimilis*, var.

†**A. nucula**, Smith. (**Amastra**.) Proc. Zool. Soc. pl. 10, f. 19-1873.

*Lanai.*

†**A. nucleola**, Gld. (**Achatinella**.) Proc. Bost. Soc. 28-1845.

**A. brevis**, Pfr.? Proc. Zool. Soc. 1845.

*Laminella nucleola*, Pfr. Mall. Blätt. 142-1854, 165-1856.

*Amastra nucleola*, Pse. Proc. Zool. Soc. 649-1869.

*Kavai.*

†**A. obesa**, Newc. (**Achatinella**.) Ann. Lyc. N. Y. 24-1853. Proc. Zool. Soc. pl. 24, f. 39-1853.

*Amastra obesa*, Pfr. Mall. Blätt. 164-1856.

*Amastra obesa*, Pse. Proc. Zool. Soc. 649-1869.

*Haleakala, Maui.*

†**A. Peasii**, Smith. (**Amastra**.) Proc. Zool. Soc. pl. 10, f. 13-1873.

*Laminella Peasii*, Pfr. Nomenc. Hel. Viv. 313-1881.

*Sandwich Islands.*

†**A. petricola**, Newc. (**Achatinella**.) Amer. Jour. Conch. ii, pl. 13, f. 6.

*Laminella petricola*, Pfr. Mall. Blätt. 165-1856.

*Amastra petricola*, Pse. Proc. Zool. Soc. 650-1869.

*Molokai.*

†**A. porphyrea**, Newc. (**Achatinella**.) Proc. Zool. Soc. pl. 22, f. 16-1853.

*A. grassa*, Pfr. Proc. Zool. Soc. 204-1855. (Var.)

*Laminella porphyrea*, Pfr. Mall. Blätt. 130-1854-165-1856.

*Amastra porphyrea*, Pse. Proc. Zool. Soc. 650-1869.

*Manoa, Oahu.*

†**A. porphyrostoma**, Pse. (**Amastra**.) Pl. I, f. 6. Proc. Zool. Soc. 649-1869.

*Amastra porphyrostoma*, Pfr. Nomen. Hel. Viv. 311-1881.

*Oahu.*

*Obs.* This shell resembles examples of *A. farcimen*, Pfr. in Coll. Newcomb, from the Coll. Cuming.

†**A. pusilla**, Newc. (**Achatinella**.) Proc. Zool. Soc. pl. 23, f. 39-1853. Amer. Jour. Conch. ii, pl. x, iij, f. 5.

*A. pulla*, Pfr. Proc. Zool. Soc. 209-1855.

*Laminella pusilla*, Pfr. Nomen. Hel. Viv. 334.

*Amastrea pusilla*, Pse. Proc. Zool. Soc. 650-1869.

*Lanai.*

†**A. reticulata**, Newc. (**Achatinella**.) Proc. Zool. Soc. pl. 24, f. 54-1853.

*A. transversalis*, Pfr. Proc. Zool. Soc. 204-1855.

*A. conspersa*, Pfr. Proc. Zool. Soc. pl. 30, f. 26-1853.

*Achatinellastrum reticulata*, Pfr. Mall. Blätt. 141-1854.

*Amastrea reticulata*, Pfr. Mall. Blätt. 164-1856.

*Amastrea reticulata*, Pse. Proc. Zool. Soc. 649-1869.

*Waianoe, Oahu.*

†**A. rubens**, Gld. (**Achatinella**.) Pro. Bost. Soc. 27-1845. Rve. Mon. pl. 6, f. 42b.

*Laminella rubens*, Pfr. Mall. Blätt. 129-1854-165-1856.

*Amastrea Mastersii*, Pfr. (Non Newc.)

*Amastrea rubens*, Pse. Proc. Zool. Soc. 650-1869.

*Oahu.*

†**A. rubida**, Gul. (**Amastrea**.) Proc. Zool. Soc. pl. 10, f. 12-1873.

*Laminella rubida*, Pfr. Nomen. Hel. Viv. 313-1881.

*Kahuku, Oahu*

†**A. rudis**, Pfr. (**Achatinella**.) Proc. Zool. Soc. pl. 3, f. 17-1855.

*A. chlorotica*, Pfr. Proc. Zool. Soc. 205-1855.

*A. albida*, Pfr. Proc. Zool. Soc. 202-1855. (*Rudis* var. B.)

*Laminella rudis*, Pfr. Mall. Blätt. 165-156.

*Oahu.*

†**A. rustica**, Gul. (**Amastrea**.) Proc. Zool. Soc. pl. 10, f. 17-1873.

*Kula, East Maui.*

*Obs.* This species may be only a variety of *variegata*, Pfr. Mr. Smith says *rustica* is allied to *confiera*, which latter may be another variety of *variegata*.

†**A. rugulosa**, Pse. (**Amastrea**.) Jour. Conch. xvij 95-1870.

*Kula, East Maui.*

*Obs.* This shell is near *sphoerica*, but the latter is larger and more depressed than *rugulosa*.

†**A. sericea**, Pfr. (**Laminella**.) Mon. Hel. Viv. iv, 179.

*Sandwich Islands.*

†**A. spirozona**, Fér. (**Helix**.) Mon. tab. 155, f. 14-15.

*A. boetica*, Migh.

*Laminella spirozona*, Pfr. Mall. Blätt. 127-1854-156-1856.

*Amastrea spirozona*, Pse. Proc. Zool. Soc. 650-1869.

*Oahu.*

**A. sphoerica**, Pse. (**Amastra**.) Jour. Conch. 1870. Jour. Conch. pl. 1, f. 5-5a-1876.

*Lanai.*

**A. solida**, Pse. (**Amastra**.) Jour. Conch. xvij 173-1869.

*Oahu.*

†**A. textilis**, Fér. (**Helix**.) Pl. I, f. 8. Tab. Syst. Animal Moll, p. 56, No. 436-1819.

*A. ventulus*, Rve. Mon. No. 31 (non Fér).

*A. microstoma*, Gld. Proc. Bost. Soc. 25-1845.

*Laminella textilis*, Pfr. Mall. Blätt. 126-142-1854-164-1856.

*Amastra textilis*, Pse. Proc. Zool. Soc. 649-1869.

*Sandwich Islands.*

†**A. tristis**, Fér. **Helix** (**Cochlogena**). Tab. Syst. Animal. Moll. p. 56, No. 435 1819.

*Bulimus tristis*, Pfr. Mon. Hel. Viv. ii, 240-1842.

*A. fuliginosa*, Gld. Proc. Bost. Soc. 28-1845.

*Laminella tristis*, Pfr. Mall. Blätt. 141-1854-164-1856.

*Amastra tristis*, Pse. Proc. Zool. Soc. 649-1869.

*Palolo, Oahu.*

†**A. turritella**, Fér. (**Helix**.) Hist. Moll. pl. 155, f. 13.

*A. Oahuensis*, Green. Mal. Lyc. 1827.

*Laminella turritella*, Pfr. Nomen. Hel. Viv. 313.

*Amastra turritella*, Pse. Proc. Zool. Soc. 650-1869.

*Sandwich Islands.*

†**A. umbilicata**, Pfr. (**Achatinella**.) Pl. I, f. 11. Proc. Zool. Soc. 205-1855.

*Laminella petricola*, Pfr. Var. Mall. Blätt. 165-1856.

*Sandwich Islands.*

*Obs.* When in London I had the good fortune to obtain this rare shell, for G. M. Sowerby Esq. Dr. Newcomb affirms it to be a good species, in which I concur.

†**A. uniplicata**, Nobis. (**Amastra**.) Pl. I, f. 7.

Shell dextral, solid, elongate oval, occasionally cylindrical, whorls 7, slightly rounded, the last somewhat inflated, suture impressed, longitudinally striate, aperture sub-oval, white; a single white elongate twisted plicæ within; outer lip acute, color of the shell a pale ochre-yellow, concealed by a black epidermis.

L 20. D 9. Aperture 28. D 4. mill.

*Molokai.*

*Obs.* This shell is from a different island from *A. biplicata*, Newc. which it resembles, the latter possesses more coarse longitudinal striæ, and has a double plicæ within, and the aperture is red, while *uniplicata* has a single plicæ, and the aperture is white. The Pease collection contained a large number of duplicates marked "new species" by Mr. Pease.

†**A. variegata**, Pfr. (*Achatinella*.) Zeitsch. 90-1849.

*A. variegata*, Chem. Tab. 67, f. 14-15.

*A. rubens*, var. Rve. Mon. pl. 6, f. 42a.

*A. decepta*, C. B. Adams. Conch. Cont. 127-1850.

*Laminella variegata*, Pfr. Mall. Blätt. 128-1854-165-1866.

*Amastra variegata*, Pse. Proc. Zool. Soc. 650-1869.

*Head of Boothes Valley, Oahu.*

*Obs.* This is a very variable species and the name may embrace others herein enumerated as distinct species.

†**A. ventulus**, Fér. (*Helix*). Tab. Syst. Animal. Moll. p. 56, No. 437-1819. (Non Rve).

*Achatinella melampoides*, Pfr. Proc. Zool. Soc. 1851.

*Amastra melampoides*, Pfr. Nomen. Hel. viv. 311-1881.

*Amastra ventulus*, Pse. Proc. Zool. Soc. 648-1869.

*Manoa, Oahu.*

#### Section **CARINELLA**, Dr. L. Pfeiffer.

†**C. Kauaiensis**, Newc. (*Achatinella*.) Syn. Ann. Lyc. N. Y. pl. 13, f. 1-1860. Amer. Jour. Conch. ii, pl. 13, f. 1-1866.

*Leptachatina Kauaiensis*, Pse. Proc. Zool. Soc. 650-1869.

*Carinella Kauaiensis*, Pfr. Nomen. Hel. Viv. 312-1881.

*Kauai.*

†**C. obesa**, Newc. (*Achatinella*.) Proc. Zool. Soc. pl. 23, f. 59-1853.

*A. obesa*, var. *agglutinans*, Newc.

*Amastra carinata*, Gul. Proc. Zool. Soc. 83-1873.

*Carinella carinata*, Pfr. Nomen. Hel. Viv. 312.

*East Maui.*

*Obs.* Dr. Newcomb informs me that *agglutinans* and *carinata* are local varieties of *obesa*.

#### Section **LEPTACHATINA**, Dr. A. A. Gould.

†**L. acuminata**, Gld. (*Achatinella*.) Proc. Bost. Soc. 200-1848. Expd. Shells t. 7, f. 100.

*Leptachatina acuminata*, Pfr. Mall. Blätt. 154-1854, -166-1856.

*Leptachatina acuminata*, Pse. Proc. Zool. Soc. 650-1869.

*Kauai.*

†**L. antiqua**, Pse. (*Leptachatina*.) (Sub fossil.) Jour. Conch. t. 13, f. 6-1876.

*Kauai.*

†**L. balteata**, Pse. (*Leptachatina*.) Jour. Conch. t. 4, f. 4-1876.

*Kauai.*

†**L. brevicula**, Pse. (*Leptachatina*.) Jour. Conch. 169-1869.

*Kauai.*

†**L. cerealis**, Gld. (**Achatinella**.) Pl. I, f. 13. Proc. Bost. Soc. 201-1848.

*Newcombia cerealis*, Pfr. Mall. Blätt. 119-1854.

*Amastra cerealis*, Pfr. Mall. Blätt. 164-1856.

*Leptachatina cerealis*, Pfr. Mall. Blätt. 166-1856.

*Waianea, Oahu.*

†**L. cingula**, Migh. (**Achatinella**.) Pl. I, f. 14. Proc. Bost. Soc. 21-1845.

*Achatinella dimidiata*, Pfr. Proc. Zool. Soc. 205-1855.

*Bulimus cingula*, Chem., t. 67, f. 57.

*Leptachatina cingula*, Pfr. Mall. Blätt. 144-1854-166-1856.

*Oahu.*

*Obs.* *Achatinella dimidiata*, Pfr. equals *cingula*, Migh. in Coll. Newcomb, ex Auct. The figure of this shell in Chemnitz does not represent the species, but equals an *Amastra*.

**L. clausiana**, Migh. (**Bulimus**.) Proc. Bost. Soc. Nat. Hist. 20-1845.

*Hawaii.*

†**L. compacta**, Pse. (**Leptachatina**.) Jour. Conch. xvij-1869.

*Labiella compacta*, Pfr. Mon. Hel. Viv. viij 219.

*Maui.*

†**L. corneola**, Pfr. (**Achatinella**.) Proc. Zool. Soc. 90-1845.

*Leptachatina corneola*, Pfr. Mall. Blätt. 144-1854, 166-1856.

*Labiella corneola*, Pse. Proc. Zool. Soc. 651-1869.

*Sandwich Islands.*

†**L. coruscans**, Nobis. Pl. I, f. 16.

Shell dextral, ovate, very thin and polished, spire one third the length; apex obtuse, whorls  $4\frac{1}{2}$ , rounded, the last one and a half inflated; suture impressed, aperture semi-ovate, with a very thin white lamellar tooth near the base; labium slightly thickened within and white, color amber.

L 9. Diam  $4\frac{1}{2}$ . L. apt.  $3\frac{1}{2}$ . Diam. apt.  $2\frac{1}{2}$ .

*Molokai.*

*Obs.* This shell was received from Mr. D. D. Baldwin, it has the outline of *L. brevicula*, Pse. but is much larger and more polished.

†**L. costulosa**, Pse. (**Leptachatina**.) Jour. Conch. xvij-90-1870, t. 3, f. 4-1876.

*Kauai.*

*Obs.* Near *L. striatula*, Gld.

**L. cylindrata**, Pse. (**Leptachatina**.) Jour. Conch. 1869.

*Kauai.*

**L. exilis**, Gul. (**Achatinella**.) Ann. Lye. N. Y. vj t. 6 f. 15.

*Leptachatina exilis*, Pse. Proc. Zool. Soc. 651-1869.

*Oahu.*

**L. extensa**, Pse. (**Leptachatina**.) Proc. Zool. Soc. 651-1869. Jour. Conch. 1870.

*Kauai.*

†**L. fumosa**, Newc. (**Achatinella**.) Proc. Zool. Soc. t. 23, f. 28-1853

*Leptachatina fumosa*, Pfr. Mall. Blätt. 143-1854-166-1856.

*Labiella fumosa*, Pse. Proc. Zool. Soc. 651-1869.

*Manoa, Oahu.*

† **L. fusca**, Newc. (**Achatinella**.) Proc. Zool. Soc. pl. 33, f. 44-1853.

*Achatinella striatella*, Gul. Ann. Lyc. N. Y. t. 6, f. 6-1856.

*Achatinella petila*, Gul. Ann. Lyc. N. Y. t. 6, f. 17-1856.

*Laminella fusca*, Pfr. Mall. Blätt. 165-1856.

*Leptachatina fusca*, Pse. Proc. Zool. Soc. 651-1869.

*Manoa, Oahu.*

**L. fuscula**, Gul. (**Achatinella**.) Ann. Lyc. N. Y. vj, f. 8.

*Leptachatina fuscula*, Pse. Proc. Zool. Soc. 651-1869.

*Molokana, Oahu.*

†**L. gracilis**, Pfr. (**Achatinella**.) Proc. Zool. Soc. pl. 30, f. 22-1855.

*Achatinella elevata*, Pfr. Proc. Zool. Soc. 209-1855.

*Achatinella subula*, Gul. Ann. Lyc. N. Y. vj, f. 19-1856.

*Leptachatina elevata*, Pfr. Mall. Blätt. 164-1856.

*Achatinellastrum elevata*, Pfr. Mall. Blätt. 164-1854.

*Leptachatina gracilis*, Pse. Proc. Zool. Soc. 651-1869.

*Oahu.*

**L. glutinosa**, Pfr. (**Achatinella**.) Proc. Zool. Soc. 204-1855.

*Achatinella lachryma*, Gul. Ann. Lyc. N. Y. pl. 6, f. 4-1858.

*Achatinella glutinosa*, Pfr. Mall. Blätt. 165-1856.

*Leptachatina glutinosa*, Pse. Proc. Zool. Soc. 651-1869.

*Lehui, Oahu.*

†**L. guttula**, Gld. (**Achatinella**.) Proc. Bost. Soc. 201-1845. Expd. Shells, t. 7, f. 98.

*Leptachatina guttula*, Pfr. Mall. Blätt. 144-1854-166-1856.

*Achatinella gummea*, Gul. Ann. Lyc. N. Y. vj pl. 6, f. 10.

*Achatinella fragilis*, Gul. Ann. Lyc. N. Y. vj pl. 6, f. 11.

*East Maui.*

†**L. grana**, Newc. (**Achatinella**.) Ann. Lyc. N. Y. vj 29-1853. Proc. Zool. Soc. pl. 23, f. 46-1853.

*Achatinella granifera*, Gul. Ann. Lyc. N. Y. pl. 6, f. 13-1858.

*Achatinella vitriola*, Gul. Ann. Lyc. N. Y. pl. 6, f. 23-1858.

*Achatinella parvula*, Gul. Ann. Lyc. N. Y. pl. 6, f. 24-1858.

*Leptachatina grana*, Pfr. Mall. Blätt. 144-1854, 166-1856.

*East Maui.*



†**L. Hartmani**, Newc. (**Leptachatina**.) Ms. Coll. Newcomb.

*Achatinella extincta*, Pfr. (sub fossil.) Proc. Zool. Soc. 204-1855.

*Laminella extincta*, Pfr. Mall. Blätt. 165-1856.

*Leptachatina extincta*, Pse. Proc. Zool. Soc. 651-1869.

Oahu.

*Obs.* Dr. Newcomb having recent examples of this shell, has changed the name, the former being a misnomer.

†**L. laevis**, Pse. (**Leptachinata**.) Jour. Conch. xvij-91-1870. 97, pl. 4, f. 6-1876.

Kauai.

†**L. lineolata**, Newc. (**Achatinella**.) Proc. Zool. Soc. t. 23, f. 29-1853.

*Laminella lineolata*, Pfr. Mall. Blätt. 128-1856.

*Amastrea lineolata*, Pse. Proc. Zool. Soc. 650-1869.

Maui.

*Obs.* Examples of this shell from Dr. Newcomb, exhibits it as a *Leptachatina*.

**S. lucida**, Pse. (**Leptachatina**.) Proc. Zool. Soc. 651-1869.

Kauai.

†**L. margarita**, Pfr. (**Achatinella**.) Proc. Zool. Soc. 206-1855.

*Achatinella granifera*, Gul. Proc. Zool. Soc. 1873.

*Leptachatina margarita*, Pfr. Mall. Blätt. 166-1856.

Oahu.

†**L. nitida**, Newc. (**Achatinella**.) Proc. Zool. Soc. t. 23, f. 30-1853.

*Achatinella crystallina*, Gul. Ann. Lyc. N. Y. vj pl. 6, f. 14.

*Leptachatina nitida*, Pfr. Mall. Blätt. 144-1854-166-1856.

Maui and Oahu.

†**L. obclavata**, Pfr. (**Achatinella**.) Mon. Hel. Viv. iv, 568.

*Achatinella octogyrata*, Gul. Ann. Lyc. N. Y. pl. 6, f. 18-1856.

*Achatinella turrita*, Gul. Ann. Lyc. N. Y. pl. 6, f. 20-1856.

*Leptachatina obclavata*, Pfr. Mall. Blätt. 166-1856.

Oahu.

**L. obtusa**, Newc. (**Achatinella**.) Proc. Zool. Soc. 209-1855.

*Leptachatina obtusa*, Pfr. Mall. Blätt. 166-1856.

Sandwich Islands.

**L. oryza**, Pfr. (**Achatinella**.) Proc. Zool. Soc. 206-1855.

*Achatinella tritacea*, Gul. Ann. Lyc. N. Y. vj t. 6, f. 12.

*Leptachatina oryza*, Pfr. Mall. Blätt. 166-1856.

Oahu.

†**L. pyramis**,) Pfr. (**Achatinella**.) Proc. Zool. Soc. 90-1845.

*Achatinella pyramis*, Rve. Mon. t. 6, f. 41-1850.

*Achatinella leucocheila*, Gul. Ann. Lyc. N. Y. vj t. 6, f. 1. (dwarf.)

*Leptachatina pyramis*, Pse. Proc. Zool. Soc. 651-1869.

Kauai.

**L. resinula**, Gul. (*Achatinella*.) Ann. Lye. N. Y. Vj. t. 6, f. 2.

*Leptachatina resinula*, Pse. Proc. Zool. Soc. 651-1869.

Oahu.

**L. saccula**, Nobis. (*Leptachatina*.) pl. I, f. 15.

Shell dextral, ovate conic, thin and semi-pellucid, spire more than half the length. Whorls 6, slightly convex, the last inflated, suture well impressed, surface coarsely striate. Aperture roundly ovate, sub-umbilicate, columella white, with an oblong plicæ within; interior of labium white and slightly thickened; color pale green.

L 10. Diam. 6. L aft. 4. Diam.  $2\frac{1}{2}$  mill.

Hab. Sandwich Islands.

Obs. Three examples of this species were found amongst the duplicates of the Pease collection.

†**L. succinata**, Newc. (*Achatimella*.) Proc. Bost. Soc. 220-1855. Amer. Jour. Conch. ii, t. 13, f. 7.

*Achatinella marginata*, Gul. Ann. Lyc. N. Y. vj pl. 6, f. 7.

*Labiella succincta*, Pse. Proc. Zool. Soc. 651-1869.

*Leptachatina succincta*, Pfr. Mall. Blätt. 166-1856.

Wahai, Oahu.

**L. saxitilus**, Gul. (*Achatinella*.) Ann. Lye. N. Y. vj. t. 6, f. 15.

*Leptachatina saxitilus*, Pse. Proc. Zool. Soc. 650-1869.

Oahu.

**L. sculpta**, Pfr. (*Achatina*.) Mon. Hel. Viv. iv, 609.

*Leptachatina sculpta*, Pse. Proc. Zool. Soc. 650-1869.

Oahu.

**L. semicostata**, Pfr. (*Achatinella*.) Mon. Hel. Viv. iv, 565.

*Achatinella costulata*, Gul. Ann. Lyc. N. Y. vj t. 6, f. 5.

*Leptachatina semicostata*, Pfr. Mall. Blätt. 166-1856.

Oahu.

Obs. Dr. Newcomb thinks it questionable if this species is not a synonym of *L. fusca*, Newc.

†**L. simplex**, Pse. (*Leptachatina*.) Jour. Conch. 1869-70.

Hawai.

Obs. Examples *L. nitida*, Newc. (coll. Newc.) and *L. simplex*, Pse. (coll. Pse.) are similar.

**L. stiria**, Gul. (*Achatinella*.) Ann. Lye. N. Y. vj. t. 6, f. 22-1855.

*Leptachatina stiria*, Pfr. Nomen. Hel. Viv. 316-1881.

Oahu.

†**L. striatula**, Gld. (*Achatinella*.) Proc. Zool. Soc. 28, January 15-1845.

*Achatinella clara*, Pfr. Proc. Zool. Soc. August, 1845.

*Leptachatina striatula*, Pfr. Mall. Blätt. 143-1854, 166-1856.

Kauai.

†*L. tenuicostata*, Pse. (*Leptachatina*.) Jour. Conch. 170-1869.

*Leptachatina tenuicostata*, Pfr. Mall. Blätt. 166-1856.

*Hawai.*

†*L. tenebrosa*, Pse. (*Leptachatina*.) Jour. Conch. t. 3, f. 5-1876.

*Kauai.*

*L. terebralis*, Gul. (*Achatinella*.) Ann. Lyc. N. Y. vj t. 6, f. 21.

*Leptachatina terebralis*, Pse. Proc. Zool. Soc. 651-1869,

*Oahu.*

*L. teres*, Pfr. (*Achatinella*.) Proc. Zool. Soc. 206-1855.

*Leptachatina teres*, Pse. Proc. Zool. Soc. 651-1869.

*Sandwich Islands.*

†*L. turgidula*, Pse. (*Leptachatina*.) Jour. Conch. xviiij-87-1870.

*Labiella turgidula*, Pse. Jour. Conch. xviiij-167.

*Leptachatina turgidula*, Pse. Jour. Conch. 96-1876.

*Kauai.*

†*L. vitrea*, Newc. (*Achatinella*.) Proc. Zool. Soc. t. 23, f. 24-1853.

*Achatinella fumida*, Gul. Ann. Lyc. N. Y. vj t. 6, f. 9-1853.  
(Dwarf.)

*Leptachatina vitrea*, Pfr. Mall. Blätt. 144-1854-166-1856.

*Labiella vitrea*, Pse. Proc. Zool. Soc. 651-1869.

*Manoah, Oahu.*

#### EXPLANATION OF PLATE I.

- No. 1 *Partulina proxima*, Pse. Typical.
- " 2 *Partulina proxima*, Pse. Variety.
- " 3 *Achatinellastrum Nealii*, Bald. Nobis.
- " 4 *Bulimella rosea*, Swains. Variety,
- " 5 *Amastra farcimen*, Pfr. Typical.
- " 6 *Amastra porphyrostoma*, Pse. Type.
- " 7 *Amastra uniplicata*, Nobis. Type.
- " 8 *Amastra textilis*, Fér. Typical,
- " 9 *Amastra Hutchinsonii*, Pse. Typical.
- " 10 *Amastra micans*, Pfr. Typical.
- " 11 *Amastra umbilicata*, Newc. Typical.
- " 12 *Leptachatina Hartmanii*, Newc. Type.
- " 13 *Leptachatina cerealis*, Gould. Type.
- " 14 *Leptachatina cingula*, Mighls. Typical.
- " 15 *Leptachatina saccula*, Nobis.
- " 16 *Leptachatina coruscans*, Nobis.